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THE MARYLAND FARMER:

DEVOTED TO

Agriculture, Live Stock and Rural Economy.

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Wheat Culture—Drill Tine—Fertilizers best for Wheat, &c.

Editors Maryland Farmer.—In writing the article on the culture of wheat, published in your September number, I omitted a very important item, viz.:—the kind of drill tine I use in seeding. For two years past I have used with great satisfaction, the broad-cast shovel. I find it far superior to the kind sold with the drill as it puts the grain in broadcast instead of crowding it in a small trench. The shovel patented by J. H. Shreiner is by far the best I have seen, they can be attached to any make of drill and are quite inexpensive. In giving the particulars respecting my experiments with ammoniated and non-ammoniated fertilizers, I will start with corn planted upon land that had been farmed by outside tenants until its fertility was so reduced that it was found too unprofitable to continue its cultivation. This particular field I prepared and planted corn on, with an application of about 300 lbs. per acre of ammoniated Bone Black, at a cost of thirty-four dollars per ton. This fertilizer was applied to the entire field, excepting about ten acres which had about 200 lbs. per acre applied of South Carolina Rock and Kainit, at twenty-five dollars per ton, (prepared by the Maryland Fertilizer Co.,) The entire field is of the same quality of land, as near as I can judge.

The result of this experiment was one-third more corn where the South Carolina Rock and Kainit was applied, than where the ammoniated Bone Black was used. The ammonia caused the corn to fire badly and materially shortened the crop.

Experiment No. 2.—Finding the South Carolina Rock and Kainit proved so satisfactory with my corn, I concluded to try 5 tons on my wheat in the fall of 1880, but

knowing that wheat was composed to some extent of different constituents or elements from corn, and that ammonia was thought imperatively necessary to produce a good crop, I procured five tons ammoniated South Carolina Rock, four tons ammoniated Animal Bone, four tons slaughter-house refuse and South Carolina Rock, mixed, one ton slightly ammoniated Animal Bone, and — ton ammoniated Bone Black. I applied these several varieties, each by itself, on the same character of land, and the same quantity per acre in each instance, and I am very sure there was not one peck more wheat per acre, on the land where the most expensive ammoniated fertilizer was used than where the South Carolina Rock and Kainit was applied. The clover sowed on the wheat in the spring of 1881 was uniformly good over the entire cultivation. Experiment No. 3.—The South Carolina Rock and Kainit proving to be much more economical than the ammoniated fertilizer. I used it on one entire field with the exception of about one acre, near its centre, in the fall of 1881. On this acre I applied 400 lbs. South Carolina Rock, ammoniated, at double the cost of the non-ammoniated. At harvest time there was not one particle of difference in the wheat, either in quantity or quality. On another field I used Animal Bone, ammoniated, South Carolina, ammoniated, and South Carolina Rock and Kainit, at half the cost of the two first named, there was no perceptible difference in the yield or quality of wheat, (where the same kind of wheat was sowed,) and so clearly was this developed, that the party who threshed my grain, a very practical New England gentleman remarked that there would be a great demand for South Carolina Rock and Kainit this fall. This same gentleman has been threshing my

grain for the last four years, and as he is a live Yankee, has been watching my experiments very closely, and so thoroughly convinced was he, last fall, of the superiority of the South Carolina Rock and Kainit over any of the ammoniated fertilizers, he got me to procure for him sufficient to apply to his entire wheat crop. This fertilizer cost him, applied to the land, not over twenty dollars per ton. This season he had the opportunity of comparing results with a neighbor who used a forty-eight dollar ammoniated fertilizer, they each used the same number of pounds per acre, and seeded the same quantity of wheat. The neighbor's land ought to be the best as it is river land, and owned by a very practical man who tries to work things to the best advantage. The gentleman referred to, raised 100 bushels more wheat, (he threshed both crops,) than the neighbor who used the forty-eight dollar fertilizer. So thoroughly convinced am I of the uselessness of the artificial application of ammonia to land, that I shall rely in future entirely upon thorough cultivation to attract and retain beneficial atmospheric influences and when my land is not in active cultivation make it a point to keep it well covered with clover or mixed grasses, lime upon these, and when fallowed apply South Carolina Rock and Kainit in re-seeding down. Phosphoric acid and potash are the elements most needed in our lands. After these thorough tests I am disposed to give Dr. A. P. Sharp all the credit possible for his long persistent efforts to establish a fact that would have saved the agriculturists millions if he could have influenced them to abandon the use of an article that has been the ruin of many. To my own knowledge, Dr. Sharp has made a very poor farm one of the most productive of any in the fertile county of Kent, and in doing so, has ignored the application of ammoniated fertilizers entirely, except in making experiments. May he be blessed with a long and happy life, and the community he has tried to serve so faithfully be brought to a proper appreciation of his honest and faithful efforts to serve them.

Yours Respectfully,

T. R. Crane.

Mantua, Northumberland Co., Va.

Are you troubled with rheumatism? Use Kendalls Spavin Cure. Read advertisement.

For the Maryland Farmer:

Several Useful Hints—Corn and Wheat.

Now is the time to save SEED CORN for next year's planting. There is often a failure in the corn crop caused by defective seed. The crib or granary is not the place to select seed corn; the field is the place. Go through the field before the corn is cut up; find the stalks that have two or more good full ears upon them, well filled out at the top end with kernel; also those that are first ripened; select these ears and tie them up by one or two of the husks, in bunches of three to five ears and hang up in a safe place till wanted for planting, and be sure you will have seed that will be certain to germinate, cap up and grow on thriftily. Soak the seed in salt brine 10 to 12 hours, then roll in lime to dry it, before planting. Thus treated it will all come up evenly and sooner, and grow more rapidly. Col. H. Pitts, on his little farm, near this city, has a thrifty field of corn which I recently examined, and found from three to four large, plump ears on most of the stalks. Corn is our *par excellence*, American crop—National—and we should take especial pride in growing it as nearly perfect as possible, which is also profitable.

I like what is said by your correspondent in regard to *rolling wheat ground, both before and after drilling in the seed*. I have often tried it and seen others try it with astonishingly profitable results. When we plant corn, we pat down the hill with our hoe, or foot, to break the lumps and fix the soil over the seed with good effect; and the same benefit is derived by the wheat, from the second rolling, that is after seeding; besides the wind is not so likely to blow off the covering and the moisture remains around the seed to germinate it, and the soil is made more fine and pliable over and around the young and tender plant in its early growth.

It is desirable to plow all the ground possible, and *deeply, in the fall*, for spring planting, and then to be lightly scarified with harrow or cultivator, before planting. This process tends to kill insects and weeds, and better pulverizes or fines the soil, the better to nourish the young growing plants. Years of experience proved this to me.

D. S. C.

Preparing Land for Wheat.

As opportune to the season, we give the following from a valuable little treatise "On Wheat Culture," by Col. D. S. Curtiss, which we have offered for the past two years and still offer as a premium—value 50 cents—to every new and old subscriber of the MARYLAND FARMER:

"There must absolutely be a well-drained, deep, porous, warm subsoil to the depth of at least two feet, with no stagnant water, in order that air and moisture may freely circulate through all parts of the earth to that depth, which will also allow the plant roots to run down and spread out easily for their necessary nourishment. Where the land is naturally of a loose texture, as gravel and sand, to a goodly depth, or with a gravelly subsoil, the artificial drainage is less needed.

"Deep cultivation by the subsoil plow is absolutely necessary to the depth of at least twelve to fifteen inches, according to the nature of the land—whether porous or tenacious and hard—so as to enable the soil to retain moisture in a dry time and to allow an excess to pass off readily in a wet season, as well as to allow the roots to have easy, wide range. Deep cultivation is, therefore, equally beneficial against the effects of drought as against the drowning of the plants; being loose and mellow to a goodly depth, moisture from below can freely rise to the surface when the weather is dry and hot, and heavy rains can readily sink down when they form surplus water on the surface. This operation does not require the raw subsoil to be brought to the top. Most of the advantages of subsoil plowing and deep cultivation will be lost or not realized and even injury be done if the land be not also well under-drained to a considerable depth—two feet at least—because the deep plowing makes a basin of the land so plowed, where surplus water will settle and remain stagnant unless there are sufficient drains at a lower depth than the plowing, to freely carry off all excess of water. But the drainage being ample, the land cannot well be broken too deeply for best results in wheat growing. Let the subsoil plowing be done so as not to bring much of the raw, stiff under-earth to the top at first, and the next year it will be first-rate soil for grain."

Sowing Different Cereals together.

Of late years the attention of several experimental English agriculturists, (as well as some Canadian,) has been turned towards the possibility of obtaining the yield per acre, of various cereals when sown together in the same field. There seems little doubt that a much larger yield can thus be obtained. Instances are quoted where peas, oats, barley and wheat, all sown together have produced a very large yield. This plan has been especially successful where various sorts of wheat alone have been sown together, or, as we should term it, a mixed sample of seed. One man mentions a yield of upwards of seventy bushels of this mixed seed (wheat) per acre, and this crop was composed of four different sorts of wheat. A most intelligent farmer, in Pickering, lately told me he had succeeded in raising upwards of sixty bushels an acre of mixed wheat and barley. Another farmer from lower Canada states eighty bushels of mixed barley, oats and peas, and also states that in his section it is quite a common thing to thus mix seed. *A correspondent in England tells me that farmers in his locality find mixing various sorts of wheat, often very successful, and lately it has been much practiced.*—*Cor. Canadian Farmer.*

Treating Poor, Worn Out Lands.**LIME AND OTHER FERTILIZERS.**

Among the many successful farmers on the Eastern shore of Maryland, Mr. W. McKenny, of Queen Anne's county, fills no unenviable position. Commencing a few years ago, with the poor lands of that county and with limited means, he has proved what can be done by efforts properly applied. Land that was almost reduced to a barren condition, now presents vast fields of beautiful crops of wheat and luxurious growth of grass, which dispel the common idea that "farming don't pay," when the proper method is followed. He writes me that his wheat crop this season will exceed forty thousand bushels, and that lime has been one of the great agents in obtaining this result. Surely no one will claim any organic or nitrogenous matter in lime, for of all the fixed indecomposable minerals, lime presents itself as the

foremost in maintaining its mineral condition. It is the only one to stand the consuming power of the compound blow-pipe, before which all others melt away; and yet the tender roots of plants will decompose and extract their share of calcium, and send the other elements, carbonic acid and oxygen, in a new line of duty.

Regarding the true action of lime much has been written, with little convincing argument to the writer that the true secret has been brought out. Some will say that on land without organic matter, it will do no good: it must have some ternary compound to act upon. This is certainly very indefinite when I have the positive proof of its being just the thing for land that seemed to be entirely free of all signs of vegetable matter; and I have seen it fail, not showing the slightest action on land that I know had plenty of organic matter in it. This brings up a question that I am free to say, I am unable to answer, except to offer my own theory. That it does act as a panacea to some land, admits of no dispute, while in the form of shell lime it utterly fails, when stone lime will speak in the plainest manner the first season. Can this action be traced to the lime, or the magnesia? With me, both failed to show any immediate results, and I have never been able to trace any effect of lime. Lime, as all know, is an alkaline mineral, and as all soils containing much organic matter must have more or less of some organic matter in them, which acid protects vegetable matter from decay; applying lime neutralizes this acid, and the decay of matter quickly takes place. That is, a chemical action is brought on, the binary compounds formed are brought into view, and the roots of growing plants will find the necessary elements to feed upon, the lime taking a full part and doing a double duty.

Again, lime is never found except as a carbonate, and when reduced to caustic or quicklime, by depriving it of the carbonic acid by the aid of heat, so great is its affinity for carbonic acid, that before it fully cooled in the kiln, a reformation of its original or normal condition commences by the absorption of carbonic acid from the air, and in this condition it will be found in a short time after being applied to the land. And here arises a question that is often asked in your columns regarding the ap-

plication of ground limestone which I think can be answered in a few words. If the land, and the plants growing on it needs calcium, the ground limestone is just as good as the quicklime and every way more convenient and safer to handle. I have asked a number who have used ground limestone, and like everything else except well rotted manure, (either animal or vegetable,) I find failures reported in some cases and in other cases great success. Among those who have tried it and found happy results, I name Gov. Hamilton, of Maryland, who, I am told, speaks highly of its great value. The only way is to experiment and find what your lands need. Some simple and cheap means of starting the chemical action in the soil may be found. If sulphur is what is needed, plaster will prove the great agent to supply it. If chlorine is absent, salt will supply it. If phosphorus is missing, South Carolina phosphate is as good as Chicago bone, fresh from the animal. If magnesia or potash has been removed, Kainit or German salts will be found to act a good part in furnishing the missing elements.

With a good, porous soil, all the movable elements, such as carbon, hydrogen, oxygen and nitrogen, will be found in abundance in the form of carbonic acid, water, ammonia and nitric acid, the two latter furnishing nitrogen, without dried lungs, livers, blood and the refuse of shoe shops. I know of no greater legal fraud, than stuffing fertilizers with old leather, shoddy, and such worthless stuff, but I feel that the day is fast coming, and will soon be here, when millions of dollars will be saved to the farmer by his repudiating all such material, and depending upon binary compounds, which alone, I assert, are plant food. The enormous increase in the sale of the simple acid phosphate, based upon the great success from its use, tells the tale. Just here, as an answer to many of your readers who have asked where to obtain it, I will direct them to your advertising columns, where they will find a reliable house who manufactures it on a large scale, and being personally known to me, I feel no hesitation in directing them there, and I hope it is not necessary to say, that I have not one penny's interest in anything sold to farmers.—A. P. S.—*In Country Gentleman.*

Nitrogen in American Agriculture.

Our friend, Mr. A. P. Sharp, of Rock Hall, Md., has allowed us to make known the following extract from a letter under date of 14th July, received by him from the distinguished English agricultural chemist and experimenter, Sir John B. Lawes :

"The whole question of nitrogen is regulated by the amount of crop. There is no necessity for much if any artificial supply of nitrogen, if you are satisfied with 25 bushels of wheat per acre, which I see is the estimate of your crop by one of your visitors. If, however you will try and add another ten bushels per acre to the crop, you will soon find that soil and atmosphere will fail you. I am quite disposed to think that 24 bushels of wheat per acre, without ammonia, would pay better than a much larger crop with it. So I am not suggesting that you should grow larger crops. All I say is, that very few soils can furnish by nitrification enough nitric acid to supply the requirements of a large wheat crop."

BONES.

THEIR VALUE AS A FERTILIZER—HOW TO PREPARE THEM—VALUABLE INFORMATION.

BY ANDREW H. WARD.

[Written for the Maryland Farmer.]

On account of the difficulty of grinding raw bones, without which they are of no immediate value when applied to the soil, and when coarsely ground requiring large application to effect the first crop, and there gradually decomposing, lasting for years, requiring a large outlay of capital for this purpose, it was found to be economy to dissolve or soften the bones with oil of vitriol and even though it doubled the cost of the bones, yet a much less quantity sufficed, and could be applied and receive the return annually, instead of waiting for a term of years for a restoration of the capital put into the soil. When bones are used with oil of vitriol, making a super-phosphate of lime, on its application to the soil it is not used in that condition by plants, for if it was it would act corrosively upon their tender tissues, but it reverts to its original

condition, except it is now in the finest possible state of division. When mineral phosphates are used there is no difficulty in grinding them to an impalpable powder and in this form applied to the soil is more advantageous than when converted into superphosphate with the aid of oil of vitriol, which is inconvenient and expensive for farmers to use, and by using the mineral phosphates finely ground they can apply more than double the quantity of phosphoric acid to the soil at the same cost that they could in using superphosphate, they will receive back in the crop the first year as much as they would if they used superphosphate, and have as much more left in the soil for future draughts upon it. But bones and mineral phosphates can be decomposed and rendered soluble by alkalies as well as by acids, and are in this form better food for plants, as they need alkalies as well as phosphoric acid, and the alkalies are not only food, but neutralize the acids of the soil and liberate other food for plants, putting the soil in its most favorable conditions, with proper cultivation, to bear abundant crops. Bones or mineral phosphates, when composted with wood ashes in a moistened state for a few weeks, are decomposed, and are preferable for crops to the superphosphates, and most farms have the wood ashes to use; if not, the same object is attained by the use of soda ash, an article easily obtained in all the markets, and now generally used by soap boilers in making hard soaps. To dissolve bones or mineral phosphates with soda ash, make a layer of 100 pounds of bones or mineral phosphates (the last to be ground), then a layer of 100 pounds fresh-burned lime, water to be thrown on it till it begins to slake, then a layer of 100 pounds of soda ash, and so repeat till the quantity desired to make is obtained; then wet it down with water, which will slake the lime, and unite it with the soda ash, making a caustic liquor, which acts upon the phosphates, making a phosphate of soda which exists in the ash of nearly all plants, and is always present in urine and other animal manures. Growing plants—some more than others—have the power to decompose mineral substances, as has also the gases of the air and the carbonic acid water of the ground. It is also evident that other acids come into play, and exert a decisive influence. Herr Senet of Eisenach has submitted the ques-

tion to a long series of investigations, and the conclusions he arrives at are well worthy the attention of scientific men. His results go far to confirm the theory that the organic methods have played a much more important part in the formation of rocks and minerals than geologists have been in the habit of conceding. It is evident that plants, while living, are able, by the products of their growth, to act upon insoluble minerals, and appropriate certain constituents to their wants, and that, when the plant is dead, it can, during the process of decay, produce acids that either dissolve minerals or render them soluble. M. Dumas attributes the disaggregation of bones on exposure in the soil, and the removal of the phosphate of lime by water, to two causes, the one of feeble intensity and acting rarely, the other of great force and always in action. The first depends on the ammoniacal salt in water, which salt enables them to dissolve phosphate of lime. This salt is everywhere present, but in so small a quantity as to have comparatively little influence. The second depends on carbonic acid, which appears to be the true solvent of phosphate of lime, for waters charged with carbonic acid dissolve large quantities of it. Alkalies and ebullition separate the carbonic acid and precipitate the salt. The action of this acid is so powerful that shavings of ivory placed in a bottle of seltzer water are softened in twenty-four hours, as if in chloro-hydric acid, and the seltzer water contains afterwards all the phosphate of lime contained in the ivory. This property, adds Dumas, enables us to understand the introduction of phosphate of lime into plants. These facts explain the disaggregation of bones, and the dissemination of the phosphate of lime in the soil through the carbonic acid contained in rain waters. They show how, in the animal economy, bones may be redissolved by the venous blood charged with carbonic acid; they indicate the part which the fluorid of calcium acts in the teeth in protecting the osseous portion from the carbonic acid disengaged from the lungs, and dissolved also in the saliva, which at the same time is alkaline, to neutralize the acid.

A VIGOROUS GROWTH of hair is often promoted by using Parker's Hair Balsam. It always restores the youthful color and lustre to gray hair, gives it new life and removes all irritation and dandruff.

The Pea as a Renovator.

In order to restore our wasted soils to their original productiveness and bring up our best lands to a high condition, we are satisfied that the Southern farmer should rely chiefly on growing the manure on the land itself. In other words he must resort to green manuring, and use it as the substantial basis of all improvement. It is well understood by scientific agriculturists that nearly all originally productive soils contain the inorganic elements of fertility in quantities more than sufficient to produce the 20 or 30 crops that usually result in apparent exhaustion. But these elements are not in an immediately soluble and available form, and a large proportion of the whole lies so deep in the sub-soil that it is practically useless to ordinary crops. The quantity of soluble phosphoric acid and potash in a given soil at any one time would not suffice to produce more than a very few crops—perhaps not more than four or five—of grain; and were it not for the chemical action of the soil contents and the vital action of the roots of growing plants themselves in reducing the insoluble elements to a form available as plant-food, the crop would utterly fail after producing a short series of crops decreasing in rapid geometric ratio. Moreover, the organic elements of the soil—especially nitrogen—are very quickly exhausted under the system of hoed summer crops, as practiced in the South, and cannot be thereafter supplied directly from the crop itself, but must be stored up—chiefly by the agency of plants—from the atmosphere above. In the economy of nature certain plants have, in special degree, the power to draw supplies of nitrogen from the atmosphere; and by the decay of these plants, the nitrogen is imparted to the soil.

In the same way these plants draw carbon from the air and convey it to the soil where it is found in the form of *humus*—decayed vegetable matter—which performs an important office in dissolving the inorganic elements first mentioned. Such plants also send their roots deep down into the sub-soil and bring up the phosphoric acid, potash, lime, etc., that were beyond the reach of surface-rooted crops like corn, wheat and other grains, and many other crops, and leave these elements in the surface soil where they can be reached by the

roots of any crop that may be planted.

These renovating plants belong generally to the class known as leguminous or pod-bearing plants. Among these the clovers, and especially red clover, have been extensively used in England and in the Northern States of this country for enriching lands, and to some extent in the South. But the cow pea deservedly meets with more favor in the South because it is better suited to our soils and climate. The cow pea will grow almost anywhere, on the poorest sandy land, and with the greatest certainty. Two crops may be easily grown in one season if the short growing sort are planted. The following extract from the "Report of the North Carolina Experiment Station for 1881" shows what may be done in the way of increasing the yield of wheat by the intervention of repeated crops of peas:—

"The wisest method of growing wheat is that which brings nature's own agencies in the soil into action, to increase the stock of nitrogen. We must fit the soil to absorb combined nitrogen from the air by increasing the amount of vegetable matter in it, shading and keeping it moist. This is accomplished by growing green crops upon the land during the hot summer months and turning them under. No plant is so well adapted to this end in our section as the pea. This plant, with all the legumes, has the power of gathering a far greater amount of nitrogen from the atmosphere than any other plant, all of which becomes available to the wheat when the pea-vines decompose in the soil.

"Mr. W. K. Gibbs, of Davie, reports some experiments with peas and wheat extending over several years, which illustrates this. The soil was a dark gravelly one, with a yellow clay sub-soil, and was much worn. In 1870, 1871 and 1872 the land had been cultivated in tobacco, corn and oats successively. In October, 1873, Mr. Gibbs sowed the land in wheat. In June, 1884, he harvested 9½ bushels of wheat to the acre. As soon as the wheat was cut he sowed whippoorwill peas and plowed them under; having picked enough peas to pay for the seed peas, seed wheat and plowing. In 1875, Mr. Gibbs harvested 14 bushels of wheat. The season was better than the average, however. The same pea was sowed and plowed under again. The vines were so large this time that a harrow had

to be run ahead of the plow in the same direction. Twenty bushels of peas per acre were gathered this year which were sold for one dollar per bushel the next summer. In June, 1876, 17½ bushels of wheat per acre were harvested, the season being an average one. Peas sown and turned under as usual. In 1877, twenty-three bushels of wheat per acre were harvested. The season an average one.

"In the spring of 1877 clover seed were sown on the wheat and harrowed in with a light harrow. In 1878 the land was pastured until late summer. In the fall, the stand of clover not being sufficient to leave over, it was turned under and the land put in wheat. No manure was used all this time, except once a little stable manure on a small plat that was much poorer than the rest. The increase seemed to be in the weight and length of the heads and not in the straw. Mr. Gibbs prefers the whippoorwill pea, because it is earlier and matures more peas and vines before the time for plowing, and because the vines grow in a way to be more easily turned under. If sowed in rows and cultivated, the peas are just so much better."—*Southern Cultivator and Dixie Farmer*.

The Clover Plant.

Dr. Byron D. Halstead presents in the *American Agriculturist* for September, the following important facts with regard to the agricultural value of the clover plant: The clover plant is a close and deep feeder, sending its fine roots far down into the soil, filling the sub-soil with a net-work of root-lets. It exposes a large leaf surface, and is thus able to concentrate weak solutions of plant food, and prepare them for the formation of vegetable substance. The clover plant grows throughout the whole season, and is thus able to take up the nitrates as they form. These compounds of nitrogen are produced in large quantities in hot summer months, and, being very soluble, would be washed out by the rains, were it not that the clover plant absorbs them. This is one great advantage which clover has over all the common grains that finish their growth, and are harvested before the time for the most rapid nitrification arrives. It is a well-known fact that clover prepares land for the production of large crops, and this is explained in large part by the long

season of its growth, and its deep and close feeding, and the storing up of compounds of nitrogen. The clover plant is largely below ground, so that removing the tops takes away only a part of the vegetable matter that has been accumulated. The roots of clover are large and numerous; when they are turned over in plowing, and decay, they yield a good supply of plant food to such crops as feed near the surface, and must grow rapidly for only a few weeks. In this way the clover crop will help the succeeding wheat crop, and has given rise to the saying, that: "clover seed is the best manure that a farmer can use." If the whole crop of clover is turned under, as a green manure, a much larger amount of plant food is put into the soil. This is one of the quickest, cheapest, and best methods of increasing the fertility of a piece of land.

GERMAN POTASH SALTS.—With reference to the inquiry of E. S. H., Lynchburg, Va., regarding kainit, (German potash salts,) I would not use it drilled in with wheat, without admixture with bone (raw or dissolved,) or South Carolina dissolved rock. Broadcasting it pays well on grass or corn. By using about three to four hundred pounds per acre, the effect will be seen upon the next crop. Kainit runs about 12 to 13 per cent. pure potash; muriate of potash about 48 to 50 per cent. pure potash. An analysis of kainit shows that it contains:

	Per cent.
Sulphate of potash.....	24.80
Sulphate of magnesia.....	14.30
Chloride of magnesia.....	12.62
Chloride of sodium (common salt).....	32.00
Moisture.....	14.36
Insoluble matter.....	1.92
	100.00

A PEERLESS PERFUME.—The refreshing aroma of Floreston Cologne, and its lasting fragrance make it a peerless perfume for the toilet.

Dixfield, Maine, Oct. 20, 1880.

Dr. B. J. KENDALL & Co—Gents:—Please find enclosed 25 cents for revised edition of your horse book. I have tried your Kendall's Spavin Cure for curb, and it has done all you claim for it. By using one-half bottle it entirely cured the lameness and removed the bunch.

Yours truly, FRANK STANLEY.

What Shall we Eat.

This is an important question in these times of high prices. Dr. Hall, in his Journal of Health, a good authority, by the way, says the cheapest articles of food at present prices, are—bread, especially cornmeal, butter, molasses, beans and rice. He shows that 25 cents' worth of flour, at 8 cents per pound, contains as much nutriment as \$2.25 worth of roast beef, at 25 cents per pound; and that a pint of white beans costing seven cents, has the same amount of nutriment as three-and-a-half pounds of beef, at 25 cents per pound; or in other words, that the roast beef diet is twelve times as expensive as the beans. Furthermore, a pound of Indian meal will go as far as a pound of fine flour, costing nearly twice as much. Here are some of the common articles of food, showing the amount of nutriment contained and the time required for digestion:

	Time of digestion.	Amount of nutriment. (per cent.)
Apples, raw.....	1 h. 50 m.	10
Beans, boiled.....	2 30	37
Beef, roasted.....	3 30	26
Bread, baked.....	3 30	60
Butter.....	3 30	96
Cabbage, boiled.....	4 30	7
Cucumbers, raw.....		2
Fish, boiled.....	2	20
Milk, fresh.....	2 15	7
Mutton, roasted.....	3 15	30
Pork, roasted.....	5 15	24
Poultry, roasted.....	2 45	27
Potatoes, boiled.....	2 30	13
Rice, boiled.....	1	38
Sugar.....	3 30	96
Turnips, boiled.....	2 30	4
Veal, roasted.....	4	25
Venison, boiled.....	1 30	22

According to the above tables, cucumbers are of very little value, and apples, cabbage, turnips, and even potatoes, at present prices are expensive eating. Some vegetables and fruits should, however, enter into the family consumption, if only for sanitary reasons. Among those which contain the most saccharine matter, sweet potatoes, parsnips, beets and carrots are the most nourishing. Roast pork, besides being an expensive dish, requires too lengthy a drain upon the forces of the stomach to be a healthy article of diet.

New York Agricultural Experiment Station.

[These series of frequent reports are intended to inform the public of progress at the Station, rather than to give complete results.]

N. Y. AGRIC'L EXPERIMENT STATION, }
GENEVA, N. Y., Sept. 2, 1882. }

BULLETIN NO. VII.

The potatoes in the garden having ripened, we, this week, put the value of theories to the test. Ten hills of the plants grown from single eyes, cut shallow, and 20 hills of other methods of seeding were dug, the yields carefully, sorted counted and weighed. Multiplying the produce of the ten hills by two, in order to have comparative results, we have to offer the following figures: 20 hills, single eyes, cut shallow, gave 14 merchantable tubers, weighing 2 pounds, and 38 small potatoes, weighing 1 pound 13 ounces. The single eyes, cut deep, gave 57 merchantable tubers, weighing 12 pounds 10 ounces, and 72 small potatoes, weighing 3 pounds 3½ ounces. The ordinary cuts yielded 55 tubers of merchantable quality, weighing 10 pounds 9 ounces, and 122 small potatoes, weighing 6 pounds 4½ ounces. The whole potatoes yielded 43 merchantable tubers, weighing 6 pounds 13½ ounces, and 134 small potatoes, weighing 6 pounds 3½ ounces. The merchantable tubers yielded by single eyes, cut shallow, average 2.28 ounces in weight; the small potatoes .76 of an ounce. The merchantable tubers from single eyes, cut deep, averages, 3.54 ounces in weight; the small potatoes, .71 of an ounce. The merchantable tuber from the ordinary cuts average 3.07 ounces in weight; the small potatoes .82 of an ounce. The merchantable tubers from the whole potatoes average 2.55 ounces in weight; the small potatoes .74 of an ounce. Again, the total crop averaged per tuber for the single eyes, cut shallow, 1.17 ounces; for the single eyes, cut deep, 1.96 ounces; for the ordinary cuts, 1.52 ounces, and for the whole potatoes, 1.18 ounces.

These potatoes were planted upon soil, not especially favorable, either in natural quality or in fertility, and were in no respect pampered during growth. The quality of the potatoes yielded by the eyes cut large was superior, while that from the other seed was but ordinary. As our

drills were three feet apart, and the hills one foot apart, we can readily arrange our figures to an acre area by multiplying our products by 726, and the result in pounds divided by 60, to reduce to bushels. Doing this we have:—

Kind of Seed.	Yield per Acre.		
	Merch'table.	Small.	Total
Single eyes cut deep. . . .	152 bus.	39	191
Ordinary cuts.	127 "	75	202
Whole potatoes.	83 "	95	158

Further trials are required before we can eliminate the effect of the soil in order to determine the influence of the cutting of the seed as a factor of determinate value. We can but claim at present that we have obtained strong indications of the value of a method, easy of application, and which seems potent for influencing quantity and yield. Moreover, in our careful examinations of the potato tuber, we seem able to offer a reasonable explanation for the results we have found to exist in field culture, and which we have noted. A second examination of ten hills each, the results of which were photographed, fully corroborates the statements already given.

Pacy's Ray Grass, a variety of *Lolium Perenne* was sown in drills, April 10th, and vegetated May 2nd. On May 9th it was far ahead in vigor of the other seventeen species of grasses sown, and during the summer has presented a shining green, dense, spreading growth of succulent herbage. It offers promise of being a superior grass for pastures, even in the year of planting. It has not as yet seeded this year, and its habits as a hay grass cannot be determined. Our ten feet square plot, however, justifies a glowing tribute to the possible great usefulness which it may develop for grazing purposes, while the whole appearance of the plant is of one which can retain its succulency during summer drouths. Vilmorin says the variety is a perennial one, very hardy and with abundant foliage. Heads and culms quite short and presenting a robust appearance, more long-lived than ordinary ray grass, a quality which recommends it greatly for the formation of lawns and for fine appearing turf. It produces but little seed, and the seed weighs from thirty-two to thirty-seven pounds per bushel.

The *Soja Hispida*, or Japanese bean is now three feet tall, of luxuriant foliage,

and crowded with small pods containing from one to three beans each, and the bloom is still forming. As a forage plant, as also for a food plant, provided the beans prove acceptable to our palate, it seems to afford much promise, but we have not sufficient plants to allow of our testing its quality for ourselves as a palatable food. The seeds we purchased did not vegetate, and for the thirty feet of row which we possess we are indebted to Mr. Saze, a Japanese student at Cornell University. The plant is much cultivated in China and Japan and other Asiatic countries, the pulse being esteemed, eaten both green and dried, as well as forming an ingredient in sauces and other culinary preparations. Mr. Saze says the Japanese boil the green, hairy pods before shelling the green beans for eating. This bean probably forms the most concentrated food furnished by the vegetable kingdom. Some analyses made at the Tokio Agricultural College show the white bean to contain 37.75 per cent. of albuminoid and 28.89 per cent. of fat. An analysis of the black variety given by Manning shows 41.54 per cent. of nitrogenous constituent and 12.31 per cent. The analysis of pods by Wein, give as an average of five analyses, 5.97 per cent. of albuminoids and 1.52 per cent. of fats, and four analyses of the straw gave 7.75 per cent. of albuminoid and 2.29 per cent. of fat. In 1854, seeds of the soja bean were distributed in two varieties from the United States Patent Office, but this introduction seems to have become lost. Within a few years this bean has again received attention, and has been reported upon very favorably in Germany. In Japan this bean is called *daidzu* by the natives, but *soya* by foreigners.

On August 14th we collected specimens of the cow pea. These plants were growing rapidly, were very succulent, and had presented no appearance of bloom. Our chemist, Mr. S. M. Babcock, reports the following results of an analysis:—

	Fresh plant.	Dry substance.
Water.....	86.03
Ash.....	1.89	13 60
Nitrogen.....	.52	3.74
(Equivalent to albuminoids)...	3.25	23.37
Fat (ether extract).....	.62	4.45
Crude fiber.....	2.87	20.58
Carbo hydrates, by difference..	5.34	33.00

On August 6th, we picked for analysis, beans of the early China variety, while just in condition for table use. Mr. Babcock reports the analysis as follows:—

	Fresh bean.	Dry substance.
Water.....	38.46	...
Ash.....	.83	5.01
Nitrogen.....	.44	2 64
(Equivalent to albuminoids)...	2.75	16 50
Fat (ether extract).....	.84	2.05
Crude fiber.....	2 58	15 60
Carbo hydrates, by difference..	10.04	60.84

E. LEWIS STURTEVANT, M. D., Director.

For the Maryland Farmer,

Agricultural Exhibitions.

The season of the year has arrived in which all societies for the promotion of agriculture are expected to have an exhibition of the products of the farm and garden: these exhibitions are of great benefit to the farming community if they are properly conducted and patronized as they should be.

The most successful exhibitions are those which are conducted by societies made up almost entirely of practical agriculturists, and who have associated themselves together wholly for the improvement of their modes of farming and the advancement of the general cause of agriculture.

Unfortunately, comparatively few societies are organized upon these principles, and as a result, society exhibitions have grown into disrepute and the true farmer has come to distrust them, and hence withholds his patronage and encouragement.

One great drawback to the success of many agricultural societies rests in the fact that they are very largely, if not wholly, under the control of a class of horse-owners, who have *horse* wholly at heart and no regard whatever for the advancement of agriculture.

As a result in the making up of the best of premiums offered, while trotting horses occupy a very prominent position and are offered large purses, the farmer who has been laboring year after year for the improvement of his farm, finds that even though it be the best within the limits of the society, he is offered only a mere pittance by way of encouragement therefor.

Then again, as a sort of expected appendage to shows in which *horse* predominates,

there are a large number of catch penny games bearing very strongly if not purely of a gambling nature, which are strongly objectionable to very many farmers who are averse to bringing their sons in contact with the exciting attractions of games and chances.

If trotting must be carried on let it be done by purely trotting associations so that the public may know exactly what they are patronizing and to what temptations their families are subjected, rather than to encourage the advertisement of an agricultural fair, when it is in reality only a horse trot.

Farmers are sufficiently numerous over our whole country to maintain purely agricultural exhibitions where the products of the farm can be brought into honorable competition, and not only that, but where the farmers family can be taken without fear of being brought in contact with contaminating influences, such as are likely to follow in the wake of horse trotting.

There is another thing that should be strongly guarded against, and that is any exclusiveness that gives even the shadow of appearance of a ring. It has been charged that the New England Agricultural Society was simply a ring, a sort of mutual admiration society, which distributed its prizes within its own small circle; be that as it may, it certainly has lost its hold upon the confidence of the active farmers, and, as has justly been demonstrated, its exhibitions are such, more in name than in reality.

Exhibitions should be for the encouragement of the farmer and his pursuit rather than his discouragement.

Columbia, Conn. WM. H. YEOMANS.

HOPE FOR DRUNKARDS.—My husband had drunken habits he could not overcome until Parker's Ginger Tonic took away his thirst for stimulants, restored his old energy of mind and nerves and gave him strength to attend to business—Cincinnati Lady.

"WHAT ALEXANDER MIGHT HAVE DONE."—The late Czar of Russia was eminently a great man, as his action in liberating thirty-six million serfs from slavery qualified him to be. Yet with all his greatness, Alexander left it to Dr. Swayne to liberate the world from the annoyance and pain of scores of skin diseases, by producing Swayne's Ointment. Think of the tens, hundreds, thousands it has cured, and then remember it is economical, effective, reliable, and pure, and if you will only try it you will have a cure.

How much Tobacco do we Grow?

	Pounds.	Acres.	Lbs. per Acre
Kentucky	171,121,184	226,127	756
Virginia.....	80,099,838	139,423	573
Pennsylvania.....	36,957,772	27,567	1,340
Ohio.....	34,725,405	34,679	1,001
Tennessee.....	29,365,052	41,532	707
North Carolina....	26,986,448	57,215	471
Maryland.....	26,082,147	38,174	683
Connecticut.....	14,044,652	8,666	1,620
Missouri.....	11,994,077	15,500	773
Wisconsin.....	10,878,463	8,811	1,234
Indiana.....	8,872,842	11,055	742
New York.....	6,553,351	4,938	1,327
Massachusetts.....	5,369,436	3,358	1,599
Illinois.....	3,936,700	5,625	699
West Virginia.....	2,296,146	4,071	564

Total.....469,283,463 lbs.

626,641 acres; average, 748 lbs.

Kentucky grows over one-third (36 per cent.) of the entire tobacco crop of the country, and the above 15 States supply 99 lbs. out of every 100 lbs. grown; 22 other States and Territories report a small amount—together only one per cent. The yield varies all the way from 471 lbs. per acre in North Carolina, to 1,620 lbs. per acre in Connecticut, in which State fertilizers are largely used.—*American Agriculturist.*

This Great and Glorious Country.

With her crop of 6,000,000 bales of cotton, toward 600,000,000 bushels of wheat, and over 1,500,000,000 bushels of corn, we may look upon our enormous and astonishing imports as not alarming; the owners of American railway property have a right to expect particularly happy results and those who feel discouraged at the comparative slowness of our export markets may possess their souls in peace. As Europe must take our surplus, we need not be in a hurry to send our new cotton and our foodstuffs abroad, and we need not send anything on which we have not made a good profit. The future is decidedly in our favor. Our farmers have and will have an abundance of everything; our mechanics and laborers will have cheap food; our factories are busy and will so continue; our transportation companies begin the best season on record; our merchants and tradesmen will have better buyers and more customers than during the last twelve months; our financial institutions will be busy and prosperous; and the whole country will celebrate Thanksgiving Day with more than ordinary joy and satisfaction.—*Boston Advertiser.*

Farm Work for October.

October has come with his many blessings and his many calls upon the husbandman for assiduous, yet agreeable, labor. In England, this is the prime month for making "Old October Ale," and in wine countries for the finest wines that vineyards produce, while in this country, cider making and whiskey distilling is pressed with all the energy that particularly distinguishes "young America." It is a very important month in many respects to all classes of farmers, whether purely farmers, planters, orchardists, or engaged in other branches of agriculture as a specialty, or even with those who diversify their products.

Tobacco.

The tobacco crop must be housed this month, or Jack Frost will secure it for himself. As early as possible, this crop must be put in the house; and if money is expected from it, great care must be observed in the handling, curing and after management of it. It is idle to expect high prices for frost-bitten, weather-beaten, worm-eaten, badly-cured, half-assorted, bad-smelling tobacco. The reverse of all this brings revenue to the poor planter, in despite even of the cruel taxes imposed on it in this country and in Europe. Planters should struggle to do their best to manage the *little* tobacco they have made this year, in the best possible manner; and if their labors are not correspondingly rewarded, see that their representatives in the public councils of the nation, do their duty to them in repealing the laws that are so oppressive and offensively discriminating in their effects upon the tobacco interest—the largest, except the cotton interest, known to American industry.

Corn.

Corn, if not already cut off, should be at once, or the fodder will be lost. The first frost and high wind will strip the blades and bear them away like the leaves of the trees. Shuck such as is dry, and put in the corn-house small quantities at a time.

Potatoes.

The latter part of this month, in the middle States, Irish potatoes ought to be gathered unless the tops are very green, when they should be left to the ripening process of this and the next month. Gathered now, they should be exposed in small piles or heaps for a few days in the field if the weather be dry; if not, spread over a barn floor for a week or ten days, where they can be dried without much sunlight which turns them green, and gives to them a bitter taste, instead of the

sweetness properly belonging to a well preserved potatoe. Then, after a proper drying, that is, when they are dug wet or caught in a rain, they should be stored in cellars or stoops of fifty to one hundred bushels. The latter, we think, much the better plan in our section of country, than putting them in bulks of one or more thousand bushels in a cellar. The stoops are simply an opening like the beginning of a ditch or well, either four or five feet in diameter if it is intended to be put up in conical form, or four or five feet wide if in ditch shape, and as long as is necessary or desired, according to the size of the pile of potatoes and the way the land lies for drainage. Select good dry spots in the potato ground for this purpose, on parts of the ground which are not likely to hold water, but rather so placed as to carry off easily any water that may fall into the small conduits or drains you place around, and from the heaps you have stored. The wells or trenches should not be over a foot deep—the bottom dry. Put in the potatoes at least two or more feet in a well packed conical shape, cover with dry straw one foot thick, then dirt four inches, and well patted with spades and hoes, as the graves are rounded off by the grave-digger. As cold weather sets in, add three inches more of earth, and before severe cold begins, cover with corn-stalk or straw, or fine pine or cedar brush will do if put on in sufficient thickness. The potatoe, unlike the apple, must never freeze if intended afterward for market; nor is it hardly fit for home use if once frozen, however thawed, or however soon afterward they may be used.

Hogs.

The hogs should have corn or mush made of bran and meal allowed them twice a day, and, about the last of the month, such as are intended for the shambles, ought to be penned in clean floored pens, so arranged as to have a sleeping and eating apartment, with a pen attached where they can have coarse material for converting into composts with their own deposits. Keep the pens clean, allow them good beds of leaves or dry straw, plenty of clean water; rotten wood or charcoal once a week, also a little salt and sulphur frequently, and vary their food, such as corn on the cob, corn mush, cooked vegetables with bran and meal, swill with boiled rye or corn, pumpkins raw, etc., etc.

Orchards.

There cannot well be too many fruit trees and nut-bearing trees on a farm. Of the latter, they are not only ornamental but useful and profitable

for their nut-bearing, but valuable as timber trees. The Black Walnut, Pecan, Hickory, Oak, White Walnut and Chestnut—all are growing scarce; and as timber brings very high prices in the lumber yards, every owner of a farm should annually plant out a few hundred of these trees along his fences or corners of his fields, and other spots suitable, and where they would not interfere with the crop grounds. Fruits of all kinds ought to be planted. Those trees that are to be purchased, ought to be ordered from some reliable nursery as near home as possible, for various economic and other reasons. *Never buy of tree pedlers*, they are a plague; and have, by swindling, disgusted our people, so that many have given up tree-planting as a system. We would suggest a few apples and peaches of the older sorts, without which no orchard is complete in our humble judgment. For summer apples, we recommend Red Astracan, Keswick Codling, Early Joe, Paradise, Paine's Harvest, Delaware, Ladies' Choice, and Porter. Winter apples—Winter Catlin, Belle Fleur, Winesap, Russett, Pippins, Cart-house, Spitsenburgh, Black Coal, Baldwin and Pomme d'Api. Peaches—Old Mixon, free and cling, Lemon, Melacoton, Crawford's Late, Heath's Cling, and Heath's Free. Great pains should be taken in planting, and the earth raised in a hill around the trees; next spring trim the head close, level the hillocks and work about them, then apply ashes or lime, and mulch with coarse manure, salt, hay, straw or coal ashes three or four inches deep. To give satisfaction, fruit trees must be strictly attended for the first few years after planting. An ill-kept orchard is a "dead head" and an eye sore.

Milch Cows.

To have a full supply of good butter for winter and some for sale, the milch cows must be generously fed before the grass fails too much. Pumpkins, apples, cabbage and new corn, with the green fodder is good food, with a pail of meal and water and a little salt at night.

Rye.

This crop ought now be high enough to hide the rabbits and partridges, but it is not too late to sow now on good, well prepared land, enriched with phosphatic fertilizers. If this be done, the farmer may expect a fair return for his labor and expense.

Grasses.

Orchard Grass, Timothy and Red Top, may now be sown.

Wheat.

On the culture of this very important crop, we have in the present number of the Maryland

Farmer, a practical essay by our correspondent, Mr. Crane, of Virginia, who knows what he is talking about, as his success in farming sufficiently attests. To this article, and what Col. Curtis also says about wheat, we call the especial notice of all wheat growers. It will be seen that *perfect preparation of the ground and good seed* are by these practical writers insisted upon, if a remunerative crop is expected. We can add nothing to what our correspondents have so forcibly urged as to the culture of the wheat crop.

Garden Work for October.

This month is not a busy one with the garden—er Much work may, however, be done if it has not already been properly kept free of grass and weeds during the season. If there are small fruits and dwarf trees to be added, or vacant places supplied, this is the month to plant them. Strawberries, Grapes, Pears, &c., may now be planted. Raspberries, Gooseberries and Currants, should now be set out. Plant them four feet apart in the rows, and the rows, from centre to centre, five or six feet apart. If ground is not scarce, good distances should be allowed between the plants. The land should be enriched, made light and mellow by deep spading, especially so about the spaces occupied by the plants. Cuttings of the currant ought to be set in a sheltered border, and well mulched, to become stocky plants to be set out next autumn or the year after.

Quinces.—Every garden should have a dozen or more of these ornamental (when properly kept) and useful fruit trees; they are always in great demand both in town and country for preserving and baking.

Celery.—Earth up to blanch, and keep the plants well watered; occasionally they should have a treat of weak brine, or brackish water.

Endives.—Work, and tie up the plants to blanch.

Small Salading.—All sorts of small salading may yet be sown in the earliest portion of the month.

Rhubarb.—Sow seeds this month. By doing so a year will be gained over those sown next spring. Why is it this excellent and wholesome plant, that makes such pies, is not more cultivated? The public seems to have lost the taste for the plant; owing, perhaps, to the high price gardeners held it at when it was so popular. It is easily grown, and would pay to sell at a low price. It comes, too, at a season when there is nothing fresh to make desert of.

Cauliflower and Brocoli.—Continue to work, and water freely when required.

Asparagus Beds.—These beds should be cleaned off, and the haulm, as soon as it turns yellow, cut off, fork the beds lightly, cover with well rotted stable manure, over which a coat of salt.

Spinach and Kale.—Sprinkle over these a light dressing of straw, chaff or leaves, &c. with some light brush to keep these light materials in place.

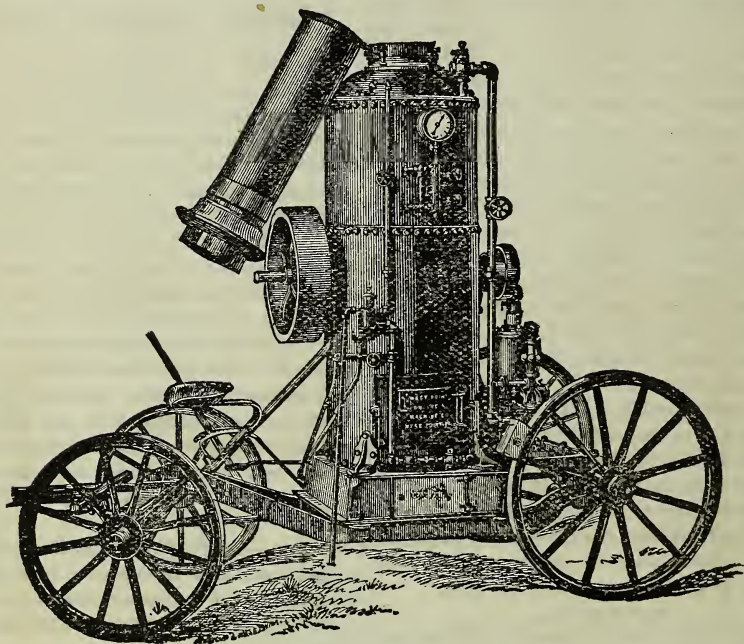
Lettuce.—Set out on a rich border, and protect as for spinach. Plants may be set four inches apart, in rows one foot apart.

Cabbage.—Prepare a very rich bed, make ridges

New and Important Agricultural Machinery and Appliances for Farming.

The Kriebel Farm Engine.

It will be seen by a glance at the cut of this engine that it is an entirely new design. The mounting is differently arranged from all others; the engine and boiler are upon a new plan and the engine itself is a perfect model of simplicity, doing away with about $\frac{1}{3}$ of the machinery which is required on



parallel, six inches high, and thirty inches apart; beat the sides of the slopes with back of the spade and set the plants midway, the slope of the ridges on the *north* side. Fill the spaces between the ridges with coarse manure up to the lower leaves of the plants, cover with brush. Next spring this is removed, and the ridges leveled and the plants worked. Set the plants thick, as many will be lost and destroyed by vermin and varmints, and if all stand they can be thinned, and those pulled out, caten as collards in very early spring.

DON'T DIE IN THE HOUSE.—Ask Druggists for "Rough on Rats." It clears out rats, mice, bed-bugs, roaches, vermin, flies, ants, insects. 15 cents per box.

other engines; no eccentrics to get out of place and interfere with the proper working of the engine; no crosshead nor connecting rod to be kept adjusted, and no steam pressure pressing the valve surfaces together. It is readily seen by any one that has any knowledge of steam engines and their construction that by doing away with so many parts, friction is reduced to a minimum. It will be seen, too, that in connecting the engine to the boiler a different plan is pursued than what has been the way of doing it heretofore. The engine as is shown is on one side of the boiler

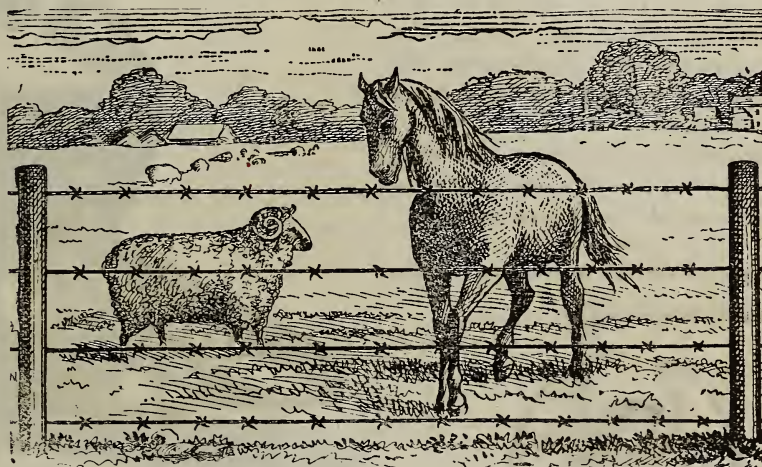
and the driving pulley on the opposite side; the shaft upon which the pulley and crank disk are keyed passes through a tube; the tube is riveted into the boiler across the diameter of the same; at each end of the tube are bolted boxes to receive the shaft; this plan equalizes the weight and strains upon the boiler. The wagon or running gears are very simple in construction. The axles (which are of wrought iron) are connected by two wrought iron pieces or bars on which the boiler and engine are bolted with six bolts which can be easily unscrewed and the engine and boiler taken from the mounting and used in any building or

material and nicely finished in a workmanlike manner. They are manufactured by the West Point Engine and Machine Co., West Point, Pa. See their advertisement in another column of the Maryland Farmer for this month.

Barbed Wire.

That barbed wire as a substitute for wood fencing is the most practical, the most durable and the cheapest to the farmer is no longer a question of doubt, but is an acknowledged and established fact.

Of the various makes of barbed wire,



for purposes where a mounted engine is not desirable; the advantage of this is apparent at once. Another important feature is that the engine and boiler are mounted on the wagon in such a manner that the fly-wheel or driving pulley runs transversely which prevents the engine from rocking while in motion. They are all supplied with an independent boiler feeder of the best make, and are supplied with all the conveniences found on any first-class agricultural engine, and very convenient to fire. The engineer can stand at the same place, attend to the fire, reach the throttle valve, fly wheel, start the injector, or pull the whistle. They are made of the very best

some are two barbed and others four barbed, and we must first decide which of these is the more desirable. What are the barbs for? They are to prick anything that shall butt against or try to get through the fence. In this case it seems reasonable that a wire that will present a barb in each direction, that is, *in and out* and *up and down*, must be more desirable than a wire that has two barbs, that are either *up and down* on the fence or *in and out*. For instance, if there are but two barbs and they present themselves in an upright position, there is nothing to prevent stock from rubbing against the wire, and on the other hand, if the barbs assume a horizontal po-

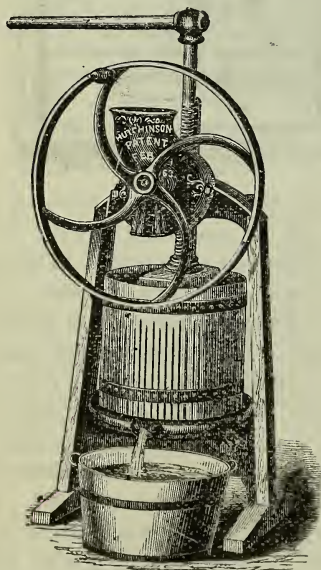
sition so as to prevent stock from rubbing against it, what is there to prevent pigs or even sheep from going through the wires? In the next place the manner in which the barb is put on the wire is important. It must be put on so as to allow of contraction and expansion caused by heat and cold.

After thoroughly examining all makes of wire we feel safe in saying that the IOWA BARBED WIRE has the best arranged barb of any we have seen. The Iowa wire is well galvanized and well twisted. The barbs are about 6 inches apart and the wire weighs about fifteen feet to the pound.

The fixtures for putting up the wire are staples, wire stretchers and cutters; the latter two are not actually necessary, but still are convenient, particularly if much wire is to be put up.

The advantages of barbed wire fencing must be apparent to every one giving the matter a reasonable amount of thought.

Hutchinson's Family Cider and Wine Mill

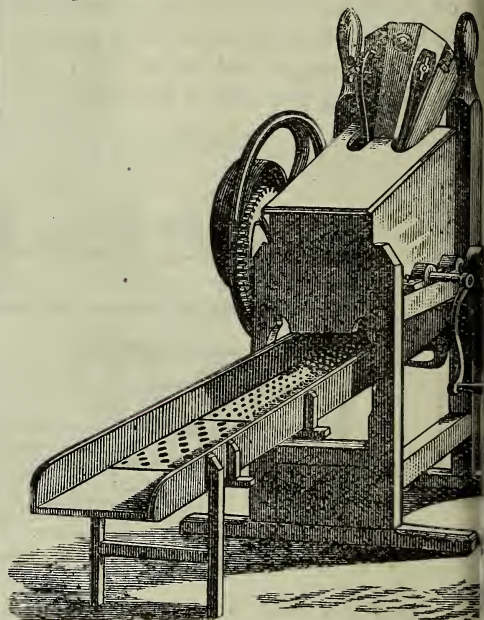


Supplies a want long felt—a small portable mill, at a price that will justify its purchase by any one wishing to make a small

quantity of wine or cider for family use, and at the same time do it efficiently. The Hutchinson is exactly what was wanted. Capacity about two barrels of cider per day. Price—\$18.

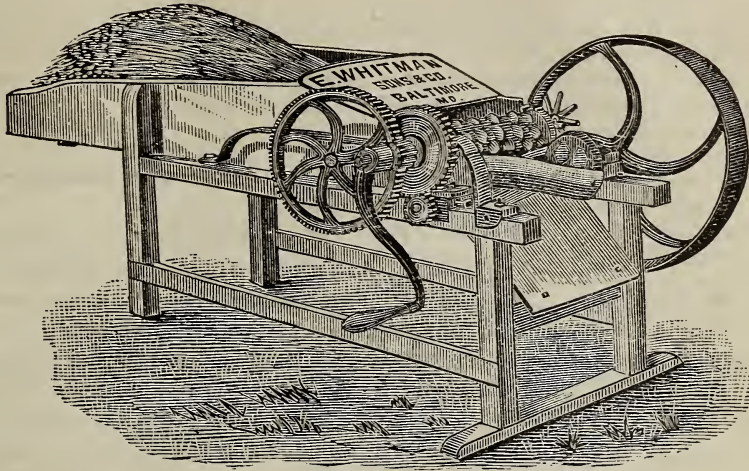
Young America Corn Sheller & Separator

The time for shelling corn is close at hand, as also feeding stock on cut hay and other provender, hence we give cuts of *Whitman's Young America Corn Sheller and Separator, and also their Hay Cutter.*



It shells and cleans the corn at one operation, dispensing with the use of a fan, works very easily, and is acknowledged by all who have seen it at work, to be a perfect sheller. This little machine has in the last two years received a large number of First Premiums in its class at the different fairs where it has been exhibited.

This is the ordinary corn sheller improved, and has had added the simple but effective shaking riddle that acts as a fan in cleaning the corn as fast as shelled. This makes it one of the best shellers we know of, and certainly is an indispensable machine on every farm.



This Hay, Straw and Fodder cutter is an admirable one. There are several sizes of these cutters, ranging in capacity from 75 to 500 bushels per hour, according to size and cost. It is also a perfect ensilage cutter and should be in the possession of every small or large farmer or feeder of stock.

For the Maryland Farmer.

Plant Food for Cotton.

Messrs. Editors of Md. Far.—I regret that my geographical position has prevented any experiments with this important production of our Southern States, but I have nevertheless always thought that of all our productions that this plant required the least nitrogen, for reasons that will appear before the reader gets through this article. Cotton, unlike wheat or corn, is a weed intended for outside and not inside work and what is exported takes but little from the soil. The cotton fibre is a pure specimen of cellulose, a ternary compound with no nitrogen, and the same can be said of the cotton seed oil, and these are the two articles that are exported, and are entirely composed of elements which are furnished by the air and water, namely, carbon, hydrogen and oxygen, hence in their exportation no mineral matter is removed and what enters the leaves, stems and pulp of the seed can be returned. In a letter recently received from a cotton planter in

Alabama, he says, from his numerous experiments he is now satisfied that cotton needs no nitrogen, and he has obtained fine results from the use of the plain fine ground S. C. Rock, a sample of which he sent me and it is certainly very fine and is rich in phosphoric acid. If his views are correct regarding the uselessness of an artificial application of ammonia, or the purchasing of fertilizers containing a large percentage of animal matter capable of forming a small amount of ammonia, if, perchance, the nitrogen finds hydrogen willing to unite with it, and which it must do to form available nitrogen, for all plants feed upon binary compounds and not elementary. Under the law of some States, any mixture that by the aid of the combustion tube of the chemist develops a certain amount of nitrogen, let it come from dried blood, lungs, livers, old leather and the like, fixes upon it a certain value, and as nitrogen is placed high in value, and as I firmly believe of no use as an artificial application, how easy it is for a worthless article to secure a high value put on it, and that value fixed, if not by statute law, by the law of the chemists who place it at about 25 cts. per pound, when the world is full of it and free to all, and furnished by every drop of condensing dew and the falling streams of rain, and yet the South has been for years a cemetery to bury the waste from all the slaughterhouses of the country for which they have paid a fearful price. The price of animal matter is regulated by the percentage of nitrogen. To illustrate

it, a sample of the matter, let it be blood, liver, cracklins, fish, or any other quarter-nary compound is put into the hands of the chemist, and by its combustion by fire it indicates 15 per cent. nitrogen, this places a value on it of about \$60 per ton, for an article containing 85 per cent. of worthless stuff, admitting there is any value in the nitrogen, which I do not. This brings the price of nitrogen up to over \$4.00 per ton, for which the farmer has to pay the usual profit to the manufacturer, as the above is the price they have to pay the slaughter houses, soap works, lard renderers, &c., no one knowing by analysis from whence it comes, unless the smell of old leather is detected in its passage through the combustion tube. No analysis determines organic matter but the elements can be collected. From a recent report from the agricultural station, Georgia, it seems that the planters are finding out that with the aid of a plain acid phosphate and material collected on the farm, they are able to raise more cotton at a much less expense than formerly, and there is no reason why the South cannot be made the garden spot of our country for the simple reason, cotton fibre and cotton seed oil obtain their elements from moving agents and the immovable ones can be restored by restoring to the soil the ground cake, not for the little nitrogen the albumen may contain, but for the mineral and carbonaceous matter, and to secure the latter in a soil the "writer" deems it of more importance than the nitrogen, not that carbon is plant food, but for its mechanical and chemical effect, for unless the latter is complete successful agriculture will not be reached, and carbon seems to be one of the connecting links to complete the chain. Hence, I say to those who have a soil with carbon burnt out by slow and long tillage, turn under peas or any other vegetable that will grow—any will make carbon—and with the application of dissolved bone, kainit and lime, you will have about all the inorganic elements entering plant life which are brought into play by the vital power of living plants. The latter furnishes the immovable and a proper mechanical condition permitting circulation, the rain and air will supply the movable ones, namely, carbon in the form of carbonic acid, hydrogen and oxygen in the form of water, and nitrogen in the form of ammonia or nitric acid, all binary compounds, no quaternary com-

pound; *i. e.* animal matter is plant food, and the little ammonia that may form in its putrefaction is too expensive a way of obtaining it.

A. P. S.

Rock Hall, Md.

Silos and Ensilage.

We have received from the Department of Agriculture, a very valuable record of practical tests in several States and Canada, by a great number of persons of high repute, concerning Silos and Ensilage. We shall refer to this interesting document at a future time, and give from it some extracts. In this number we have only room to give one extract; and to say that Dr. Loring, the present energetic head of the Agricultural Department, seeing that there was "a growing interest among farmers and dairymen in the preservation of green fodder," prompted him to address a list of questions (26 in number), to every one he could learn who had experimented in that line. To these circulars there are published over 90 replies, all more or less favorable to the system of preserving green fodder as food for stock—none seem opposed to it. *As to the profitability of Ensilage, there was not a dissenting opinion.* The Department in summing up the facts elicited by the questions, *seriatim*, concludes with the following remarks:

"The general use of ensilage must depend largely on its cheapness. Costly silos and expensive machinery must always be insurmountable obstacles to a majority of farmers. For this reason, experience tending to show what is *essential* to the preservation of fodder in silos, is of the first importance.

"Especial attention is invited to the *earth silos* mentioned in the statement of Francis Morris, Esq., of Oakland Manor, Md. Mr. Morris is a pioneer in ensilage in America, his first silos having been built, and filled in 1876. These were in the basement of his barn, walls of masonry. The next year he made a trench in sloping ground so that a cart could be

backed in at the lower end for conveying ensilage to the feeding room. The sides are sloping and the average depth does not exceed six feet.

"The cost is simply the cost of digging a ditch of similar dimensions. This trench was filled in 1877 and regularly since, and has kept its contents perfectly. Mr. Morris has several silos of the same kind, in different places, for convenience in filling. He uses a large cutter driven by a steam engine, and packs in the silo by treading with horses. The filling is carried several feet above the surface of the ground, and rounded up at the center, the excavated earth serving to confine the ensilage. The covering is first roofing-felt, then earth for weight.

"Mr. Morris has put in whole fodder and it has kept perfectly. He cuts it fine, mainly for convenience in handling and feeding. Whole fodder should be laid across, rather than lengthwise in the trench, so that it can be taken out easily.

"In order that the extent of Mr. Morris' operations may be understood, it is proper to add that his estate of Oakland Manor comprises about 1,700 acres. His wheat crop this year, 1882, was 5,000 bushels, and his corn is expected to reach the same figures. The meadows yield upwards of 200 tons of hay annually. The stock consists of 50 horses and mules, 100 cattle, 500 sheep, and 50 hogs. And as the whole is managed on business principles, Mr. Morris very justly esteems his earth silos of primary importance."

••• About Barbed Wire Fence.

In building wire fence the chief requirement is, an immovable end post. Several years' experience has taught that an end post needs to be set very firmly, to be of extra size and length, and so well braced that there can be no possible chance for it to be pulled over. The post had best be set three and a half feet, and the first post ten feet distant from it so that it may serve for a "foot" for the brace. In carrying wire over the "ups and downs" of the land, it is disposed to "run," and the fence can be made much stronger, and also guard against this, by setting every tenth post three feet, and tamping it with small stones so to hold it secure. Then in crossing hollows, the tendency of the wire is to "lift," so that in the lowest places extra

care should be taken and set one or more posts very deep and secure, so that they cannot be affected by the contraction of the wire. Always use the galvanized wire. Its cost is only one cent per pound more than the painted, which last is in reality no protection to the metal, for it soon peels off, and then to save the wire from rust, it has to be painted, and those only who have painted a barbed wire fence can enter into the spirit of a recital.—*Cleveland Herald*.

••• German Carp Fish.

Evidence is accumulating to prove that in the German carp we have a food fish, capable of furnishing unlimited supplies at very little cost. This fish is of special value to farmers, for it will live in ponds which become so warm that no other fish can exist in them. It is unnecessary to enlarge upon the added comfort it would be to a farmer if he could go out at any minute and take from his pond a five or six pound carp which would give him and the family a good dinner. Any ordinary pond will do for carp. An excavation in the course of a creek, dammed at the lower end with a grating, so made that a flood will not carry the fish away, answers perfectly. The carp will eat almost anything, and a pond of four square rods in extent will furnish all the fish food a family wants. Carp grow from the egg to three pounds in weight in one year. They multiply rapidly, a single female yielding half a million eggs in a year. They spawn in May and June. In the winter they burrow in the mud, and remain dormant, neither making nor losing growth. In the spawning season they must be fed or they will destroy the spawn. At other times they need not be fed unless there are so many of them in the pond that the aquatic vegetation and the supplies brought down by the feeding creek are insufficient. There is scarcely a doubt that a carp pond would be a profitable adjunct to nearly every farm.—*Toronto Globe*.

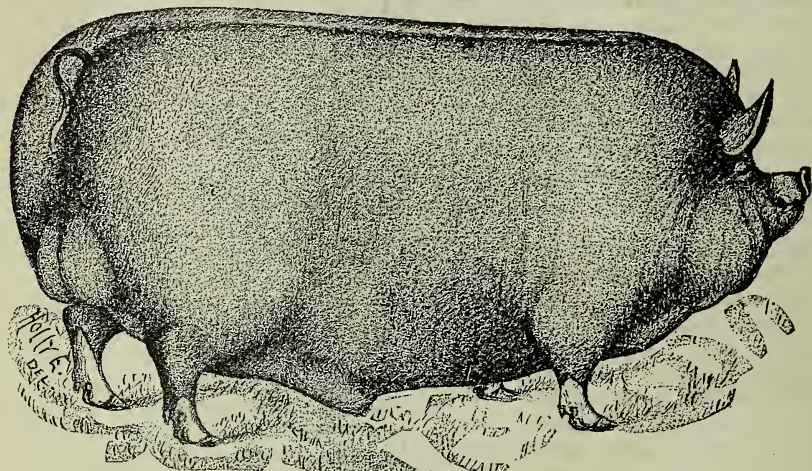
•••
ASHES should never be thrown upon manure heaps, nor mixed with any kind of manure, as the caustic potash liberates the ammonia, which is very difficult to save. Therefore, spread ashes immediately upon the land, whether grass or cultivated.

LIVE STOCK REGISTER.

Berkshire Hogs of E. B. Emory.

We give excellent illustrations of "Liverpool's Sambo," and his daughter "Sallie Sambo, XI." The first is a monstrous

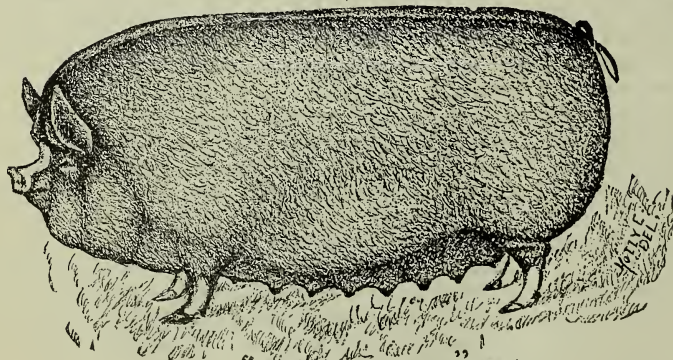
perfectly formed Berkshires. The pedigrees of these hogs are given in full in the B. H. B., and are of the most fashionable strains of the day. Liverpool's Sambo is a huge animal. His sire sold for \$700, and his dam for \$400, while his daughter Sallie Sambo cannot be bought for \$500.



LIVERPOOL'S SAMBO 2525.

hog, and the second as perfect a model of the Berkshire as the world can produce. Her sides are deep and long; a well developed ham, and a head so small, so short, narrow and beautiful that a beholder

These choice Berkshires are part of the herd of E. B. Emory, Esq., of Poplar Grove Farm, near Centerville, Queen Anne's county, Md., whose advertisement will be seen in this number of the



"SALLIE SAMBO XI," 2594.

might doubt her identity as a member of the swine family. Sallie, we are sure, would be the belle at any stock show in the land, and she is an honor to her sire, proving his ability to sire beautiful and

MARYLAND FARMER. We shall perhaps, give in the future, portraits of other members of this choice breed of Berkshires belonging to Mr. Emory.

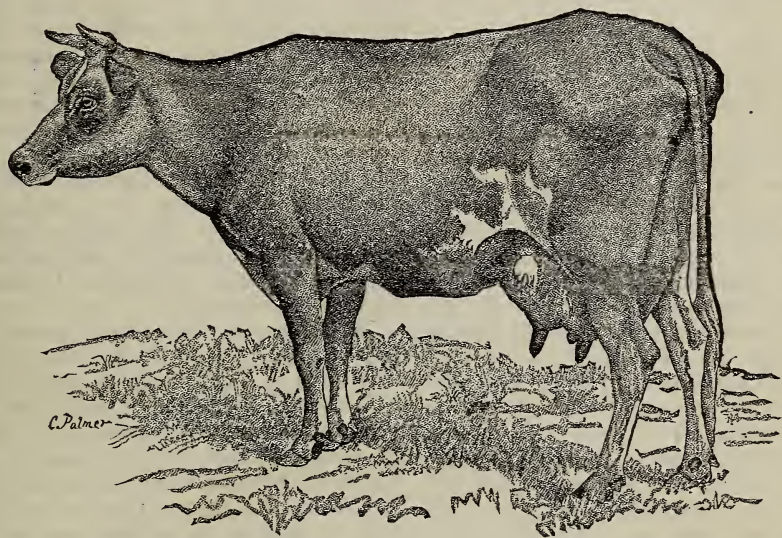
Arawana Buttercup, 6052. A. J. C. C. H. R.

The subject of our illustration is one of the best, and best known of the famous Windsor herd of Jersey cattle, owned by Messrs. Watts & Seth, of Baltimore county. She was six years old in May last, and has had four calves, three heifers and a bull. The first heifer, Cook-coo-Bud, is owned by Mr. J. E. Phillips, of Baltimore county, and the other two heifers, Duchess of Chatsworth and Arawana May, are owned by the Hon. Andrew Banks, and are all prized by their owners and held at large figures.

of the best of Colt Jr.'s daughters. Dido of Middlefield, took second prize at the Md. State Fair, 1881, Arawana Buttercup taking first, and our readers who attended this fair, know what a strong showing of Jerseys was made there.

Arawana Buttercup is also a granddaughter of Rajah, imported—a bull that has sixteen descendents in the 14th list, although imported subsequent to most of the noted ancestors.

She has milked as much as six gallons per day for a week at a time, though a small cow, and her udder when full, meas-



The bull-calf Arawana Rex, is still in the Windsor herd, and is prized very highly by his owners who know what a good calf should be. He was sired by Cash Boy, the winner of more prizes than probably any bull in America, and at the head of the Eastwood herd of Messrs. Hoover & Co., of Columbus, O., whither Arawana Buttercup was sent for service at great cost and risk, which shows that Messrs. Watts & Seth mean to have the best, regardless of cost. Arawana Buttercup is a grand-daughter of Colt, Jr. Cash Boy is a double grand-son of Colt, Jr., and his dam Dido of Middlefield, one

measures 60 inches in circumference. She has milked 35 pounds of milk at one milking, being about four gallons and one quart, and has made 15 lbs. 5 ozs. of butter in 7 days. She has all the fancy points in bone, hide, escutcheon, etc., and her head has been termed a model for the ideal Jersey.

She took second prize at Baltimore County Show, 1880, under very unfavorable circumstances. She took first prize at the Maryland State and Balto. county shows in 1881, and we regret to learn that, owing to an accidental injury which does not impair her worth but spoils her appearance temporarily, she will not be

shown at the fairs this fall, by which the public lose much more than her owners, as the former cannot study the characteristics of such stock too much. While the proprietors of the Windsor herd seem in good spirits, and do not seem to fear the results of the absence of such a cow from their show herd; we feel that a herd that is strong enough to win with so good a one left out is strong indeed.

Polled Aberdeen and Angus Cattle.

"A Scottish Subscriber," to the *Breeders' Gazette*, writes to that journal the following:

"I send you to day a private catalogue of polled Aberdeen and Angus cattle, the property of Sir George Macpherson Grant, Ballindalloch. You may find it of interest in these days of a large and increasing demand for this breed. Sir G. M. Grant has, within the last year, sold from his herd, privately twenty-three animals, for the sum of £1,874, an average of over £81 each; and this number included twelve bulls which averaged over £50. He has also, just concluded a contract for his bull calves of this year—seventeen in number after he has selected four for his own purposes—at the remunerative average of £55. As these are all sold for exportation, probably most of them will reach your side before next spring. They will be found, from the purity of their breeding, to be very prepotent, and when used to ordinary cows, will leave about ninety per cent. of their calves black and hornless. I would venture to recommend gentlemen in the States or Canada who wish to keep a pure herd of polled Aberdeen and Angus cattle to look after these bulls, especially those from Erica cows."

In the *Breeders' Gazette* of Aug. 3d, 1882, we find a cut of polled Angus cow, "Old Grannie," 35 years old, an extreme age; and an elaborate article on the "*Difference between Angus and Galloway Polled Cattle.*" The writer says that they are DISTINCT breeds, having a close general resemblance. "Both are black, hornless and 'beefy' in form, but it is claimed

by the friends of the Angus cattle that this breed is in some characteristics superior to the Galloways; and while the advocates of the latter admit that their favorite breed might be improved in some important particulars, they claim that in hardness and in value of flesh, in milking qualities and in docility, it is equal, if not superior, to any other beef breed. These facts have been mentioned that our readers might be fully informed in relation to a matter which is of importance to those who wish to improve their stock by using an Angus or a Galloway bull.

"Angus breeders now charge that certain speculators advertise both of the breeds named under the general term "Scotch polled cattle," and in other ways represent that they are essentially one and the same breed, with the purpose of deceiving the public, and fraudulently selling Galloways to those who are not acquainted with the peculiarities of the two breeds, and who suppose that in buying a Galloway they are buying one of that race which has of late years been brought so prominently before the public, and has won such high honors in the shows of Great Britain and in the great Exposition Universale in Paris.

"Breeders of Angus cattle claim that their favorites mature earlier than do the Galloways on a like quantity and quality of food, are finer boned, and that they make, when ripe, more finished and pleasing animals; that the popularity of the Angus has been enhanced in Scotland and in America, within the last two or three years, to such an extent that there are not enough good ones to supply the demand, even at very high prices; and that the purpose of the speculators referred to is to dishonestly take advantage of this popularity to put off upon unsuspicious buyers cattle worth much less in the market. That no one of the many honorable breeders of Galloways with whom we are acquainted can be justly accused of complicity in this deception we feel sure; nor do we believe that they feel that they need to use the reputation of any other breed as a crutch to support their own. They think that the Galloways, with good treatment, will compare favorably with any other beef breed; and that under the ignorance or neglect of the wants of cattle as seen on so many farms in this country,

and under the conditions of life to which cattle on the open ranges are subjected, the Galloways will do at least as well, perhaps even better than any other breed. They declare that there is no reason for trying to sneak into favor under the colors of any other known breed of cattle. * *

In reply to the assertion that the two breeds are essentially one, it is enough to say that they have long been recognized by the highest authorities in cattle breeding as distinct. The Rev. John Gillespie, editor of the 'Galloway Herd Book,' wrote:

" 'The Galloway Cattle Society for the management of a herd book was formed in the spring of 1877. It was felt that though the polled Angus or Aberdeen cattle and the Galloways, having probably originally sprung from the same source, have still a strong resemblance to each other, yet these being now distinct varieties it was desirable to have a separate herd book for each; all the more so since their respective homes are so far apart from each other.' Many other quotations, showing that the distinction between the two breeds has been clearly recognized, might be given, if more was needed to state the case. Enough evidence which must have been known to the speculators has been given to fully inform our readers. It would probably be unjust to imply that all who in their advertisements term their cattle 'Scotch Polled,' do so for the purpose of misleading the public; but it is to be noted that those who have Angus cattle to sell are careful to plainly publish the name of the breed, and that reputable breeders of Galloways advertise in the same way.' "

In addition to the above, as evidence of the growing popularity and demand for the Scotch Angus Cattle in this country, the *Maine Farmer*, speaking of Burleigh and Bodwell's last importain of 85 superior Herefords, says, Mr. Burleigh still remains in England to complete his purchases of "the famous Angus Polled Cattle from Scotland.

It is well for Maryland that Mr. Whitridge, of Baltimore, secured six of the choicest heifers and one bull from the present best herd in Scotland, that of Sir George

MacPherson Grant, which we noticed in our last number of the MARYLAND FARMER.

Since our attention has been directed to this beautiful and essentially beef breed of cattle, we have read with much satisfaction a well written and carefully prepared book on the "*History of the Polled Aberdeen or Angus Cattle*," by James MacDonald and James Sinclair, editors of the *Irish Farmers' Gazette*, and published in Edinburgh by Blackwood & Sons.

This volume gives the origin and history of this remarkable breed, and shows that it is one of, if not the oldest distinct breed of any celebrity known to the British Isles. It is traced back for centuries, maintaining its distinctive characteristics in a more or less marked degree during all that long period. The authors say.

"The contiguous counties of Baff and Moray have in no small degree contributed to the improvement of the polled Aberdeen or Angus breed. In fact, the premier polled herd of the present day—that belonging to Sir George Macpherson Grant, Bart. of Ballindalloch, M. P.—has its home on the borders of these two counties, near the junction of the rivers Spey and Aven. The origin of the Ballindalloch herd has been lost in the mists of antiquity. Of its early history nothing more definite is known than that (as described by Mr. McCombie,) it is "perhaps the oldest in the north," and that it has been "the talk of the country" for very many years. The present Baronet is an enthusiastic and accomplished breeder. For many years he has given close personal attention to the management of his large and valuable herd, and the success achieved by him has been so remarkable that we believe no one will dispute the title of the Ballindalloch herd to the premier position, which, since the dispersion of the Tillyfour herd in 1880, has been generally assigned to it."

Again, they say on page 55, that—

"Mr. Alexander Bowie, Mains of Kelly, owns the oldest herd now existing. It was commenced in 1809—the year after the foundation of the Keillor herd. What we shall have to say regarding it, more par-

ticularly in reference to the bulls produced in the herd, will fully establish its title to rank as one of the most useful agents in the improvement of the breed."

From same authority we quote:

"Performances at French Exhibitions—
In France, the polled cattle of the North-East of Scotland have, on four notable occasions displayed their superiority over most other breeds—at the International Exhibitions at Paris, 1856, 1862, and 1878, and at Poissy, in 1857. † * *

"The judges in their official report on the polled cattle at the Exhibition in 1856, say: 'The hornless breed, hitherto little known out of England, must have drawn attention in more than one respect. The specimens brought to our notice possessed in fact the following characteristic points: perfect homogeneity of race, beauty, richness and regularity of form, softness of skin, mellowness in handling, the whole united to a muscular system sufficiently developed. They presented, besides, a considerable amount of flesh, supported by a comparatively small volume of bone. We are aware, besides, that that breed joined sobriety to a great aptitude to fatten, and that it supplies the butcher's stall with beef of much esteemed quality; that it produces milk in satisfactory quantity, is of sweet temper, and is also endowed with prolific qualities.'" * * * *

"An exhibition of fat stock was held at Paris in 1862, when the polled breed achieved a great victory. At that gathering, a polled ox, exhibited by Mr. McCombie of Tillyfour, gained, besides the class prizes, the two great prizes of honor, viz., the great gold medal of France, for the best ox in any of the classes of foreign stock, and the Prince Albert 100 guinea cup, competed for between the two winners of prizes of honor for foreign and French oxen.

"The great 'crowning victory of the polled Aberdeen or Angus breed at the Paris International Exhibition, in 1878, has been more than once referred to in preceding portions of the work. There were only fifteen polled Aberdeen or Angus cattle shown on that occasion, and yet in this small collection the race was, in regard to general merit, remarkably well represented. The late Mr. Wm. McCombie, of Tillyfour, exhibited eight; Sir George Macpherson Grant, Bart., of Ballindalloch, M.

P., six; and Mr. George Bruce, late of Keig, one. As evidence of the high and uniform character of the muster of polls, it may be stated that every one of the fifteen animals was awarded either a prize ticket or an "honorable mention"—distinction not attained by any of the other sixty-four varieties of cattle represented."

We have room for no more quotations from this great authority upon this breed of cattle, but may in the future refer to its pages for the instruction of our readers as to this lately introduced breed of cattle, likely to become of inestimable value to our farmers, who want a hardy self-taking-care-of, profitable breed of fair milkers, and also possessing eminent qualities to make the choicest of beef.

Care of Sheep.

The care of even a small flock of sheep throughout the year, to have them always profitable, is a study that any man who attempts to raise sheep at all should give his attention.

It is not enough, as very many men do, who have a laudable desire to improve their sheep, as well as other stock, to make purchases of something exceedingly good, at round prices, and then bring the animals home to be treated with neglect. Such a farmer will find in a few years, perhaps it may take only a few months to convince him, to his own satisfaction, at least, that this fine stock is all a humbug, and that in making the purchase he was badly swindled. If that man, however, gets any offspring from these improved rams, or other stock, and it is eventually sold in marketable condition, the convincing proof in the end will be that the good blood has had its effect.

One of the best influences that the introduction of fine stock on the farm has, is that it brings with it usually better care and improved methods of handling. This is particularly so of sheep, because there is no other kind of stock that responds so quickly to the best of care, or in which there are heavier losses, proportionately, where the flock is neglected.—*Correspondent of National Live Stock Journal, Chicago,*

Growth of Colts.

In order to winter a colt well, and have him come out a fine, showy, sturdy animal in the spring, particular attention must be paid to his growth during the first summer and autumn. If the mare's milk is at all deficient to keep the colt in good flesh and thriving steadily, it is best to have recourse at once to cows' milk. Skimmed milk answers very well for this purpose, especially if a little flax-seed jelly, oil or cotton-seed meal, is mixed with it. A heaped tablespoonful, night and morning, is enough to begin with when the colt is a month old. This can be gradually increased to a pint per day by the time it is six months old, or double this if the colt be of the large farm or cart-horse breed.

Oats, also, may be given as soon as they can be eaten. Begin with a half-pint, night and morning, and go on increasing according to the age and size of the animal, to four quarts per day. These, together with the meal above, should be supplemented with a couple of quarts of wheat-bran, night and morning. The latter is excellent to prevent worms, and helps to keep the bowels in good condition.

Colts should not be permitted to stand on a plank, cement, paved, or any hard floor the first year, as these are liable to injuriously affect the feet and legs. Unless the yard where colts run in the winter has a sandy, or fine, dry, gravelly soil, it should be well littered, so as to keep their feet dry. Mud, or soft, wet, ground, is apt to make tender hoofs, no matter how well bred the colt may be. One reason why the horses in one district grow up superior to those in another in hoof, bone, muscle, and action, is because it has a dry limestone or siliceous soil. When the mare is at work, do not let the colt run with her; and if she comes back from her work heated, allow her to get cool before suckling the colt, as her over-heated milk is liable to give the foal diarrhoea.—*National Live Stock Journal*.

J. S. Whitney, of Pleasant Grove, Minn., a prominent breeder of thoroughbred stock has a flock of 400 merino sheep. On May 2 he sheared 25 of them, and they averaged 17½ pounds of wool per head. One ewe sheared 22 pounds of wool.

Lincoln Sheep.

The Lincoln sheep are comparatively a rare breed in the United States. They are the largest breed known, under exceptional circumstances dressing up to ninety pounds per quarter. At two years old they are recorded to have dressed one hundred and sixty pounds. They require good care and plenty of succulent food. They have been introduced in some sections of the West and into Canada, and are reported as being well liked, but further time is needed to fully establish their complete adaptability to our Western climate. Other long woolled sheep, as the Cotswold and the larger of the Downs, are giving good satisfaction, and there seems no good reason why these will not on our flush pastures with some succulent food in winter do exceedingly well.

In England fourteen pounds of wool average has been sheared as a first clip from a lot of thirty yearling wethers, the same averaging one hundred and forty pounds each, live weight, at fourteen months old. They have been known in the United States since 1835, and their long, lustrous fleeces, measuring nine inches in length, are the perfection of combing wool.

The Lincolns, originally, were large, coarse, and with ragged, oily fleeces and hard feeders. The improved Lincolns were made by judicious crosses of Leicester rams, careful selection and good feeding, and in England their wool has now a separate class, at the fairs.—*Nashville Southern Industries*.

Sheep and Wool.

In 1860, there were produced in this country about 60,000,000 pounds of wool. We now produce 240,000,000 pounds, and import from 30,000,000 to 60,000,000 lbs., nearly as much as we imported twenty years ago, the large increase in production having been absorbed by an increase of consumption, and though there is such a large increase in the production of wools, yet on account of the increase in population, we import nearly as many goods as in 1860.

Save the Good Brood Sows.

Feed is high, pork is high. It costs much more to winter a full-grown sow than it does a spring pig. The old sow, if she has reared a litter of pigs, probably is not so attractive looking as are the best of her sow pigs. All these things may tempt one to fatten the sow and keep one of the pigs for breeding purposes. To all contemplating this course we feel like giving Punch's advice to those contemplating matrimony. This was summed up in the one word "don't." As a rule, with few exceptions, a matured sow will rear more, stronger, and better pigs than will an unmatured one. In case a sow shall have proved herself undesirable, there is no question that she should be slaughtered; but if her past performance has been satisfactory, the fact that she is two years old is not a sufficient reason for sending her to the butcher. Some of the best brood sows that we have known have been in active service until they were half a dozen years old—in some cases even longer. Persistence in the custom of breeding from young and immature parents can hardly fail to tend to weaken the constitution of the stock. It may tend to further develop early maturity, but this may be gained at too great a cost.—*Breeders' Gazette*.

Sheep and Improved Farming.

Sheep have played a most important part in the improvement of the soil in all civilized countries. At an early period, sheep were kept mostly for their wool in all countries; but as populations increased, and greater demand was made upon the soil to furnish food, mutton became the principal object of sheep farming, and wool the incident. During this transition state, skillful breeders made a long, careful and practical study in improving the carcass and its early maturity. Instead of keeping sheep to their full age as breeders and producers of wool, the most persevering effort was made to mature them for a profitable market at the earliest date. This was done by judicious selections in breeding, and the most generous feeding. The sheep, like other animals, was found plastic in the hands of a skillful breeder and feeder. I was soon found that the im-

proved Southdown and Cotswold could be fitted for the most profitable market at from six to fifteen months old, except those required for breeders, and these were most profitably turned at four to five years old, instead of at seven to ten years.

The consumption of mutton is increasing in this country, especially in our large cities, and it has become profitable to supply this demand. It is profitable, first, because the price is remunerative, and secondly, because it is promotive of good husbandry—the improvement of the soil.—*National Live Stock Journal, Chicago*.

Beau-Ideal of a Dutch Cow.

A "*beste koe*" must show a finely moulded head; large nostrils; thin transparent horns; a clear, bright eye; thin, large and not excessively wrinkled eyelids, rose-colored inner members of the eye; purely red lachrymal; a kind, mild, countenance; blue nose; thin neck; free respiration; fine bones; well-formed body, with rather broad hind parts; straight back; long, thin tail; round but moderately bent ribs; developed belly; stout, yet not heavy legs; smooth joints; thin, mellow, moveable skin; soft hair; delicately haired, broad and drooping udder; four well-formed dark colored teats; well-developed milk and blood vessels; veins on the belly and about the udder to be proportionally broad and vigorous, and of wenlike swell, and the veins of the udder and inner hams to spread net-like; the openings through which the milk and blood veins enter the body to be large and roomy. A cow thus formed is also apt to show a perfect escutcheon.—*C. Muller, U. S. Consul at Amsterdam*.

Robert Bonner's horseflesh is estimated as worth \$582,000.

NEW YORK fresh beef is actually shipped in refrigerators from Fulton market to large towns in Georgia, really in the heart of as good a grazing country as there is in the world. It is the result of a faulty system which devotes the planter's energies to cotton raising and forces him to buy with the proceeds whatever is needed for the family or the farm.—*Southern World*.

The U. S. Equine Census.

The official figures to January, 1881, show that we then had 11,201,800 horses, divided as follows:

Maine.....	81,700
New Hampshire.....	57,100
Vermont.....	77,490
Mass.....	136,200
Rhode Island.....	54,000
New York.....	898,900
New Jersey.....	114,500
Penn.....	602,200
Delaware.....	20,300
Maryland.....	108,600
Virginia.....	212,900
North Carolina.....	146,700
South Carolina.....	62,000
Georgia.....	119,200
Florida.....	22,400
Alabama.....	113,900
Mississippi.....	99,100
Louisiana.....	82,500
Texas.....	963,900
Arkansas.....	191,100
Tennessee.....	326,900
West Virginia.....	124,600
Kentucky.....	402,400
Ohio.....	811,300
Michigan.....	350,500
Indiana.....	688,800
Illinois.....	1,078,000
Wisconsin.....	392,100
Minnesota.....	274,500
Iowa.....	778,400
Missouri.....	639,800
Kansas.....	299,700
Nebraska.....	166,100
California.....	263,000
Oregon.....	117,400
Other States and Ter.....	287,500

These figures must be taken as minimum, as a tax is levied on each horse, and and many are "counted out" in consequence.—*Cor. So. Live Stock Journal.*

Milk as Food for Colts.

John E. Russel, Secretary of the Massachusetts State Board of Agriculture, in speaking of forcing the growth of colts by feeding extra milk, says he first tried Jersey milk and found that it did not agree with most of them; those that it did agree with fattened. Afterward he tried Ayrshire milk and found that that agreed with them and forced their growth of bone very greatly. The colts drank from twelve to fifteen quarts of milk per day besides the mare's milk and eating a liberal quantity of bruised oats. A little runt of a colt that was considered well nigh worthless was put on this diet, and on it grew to be the most renowned "Parole."

[One of the best race horses and get- ters of racers of note in the olden days of Maryland racing, about the close of the last century, "*Hall's Union*" was raised on milk, in Prince George's county, Md. His mother dying at his birth, *Union* was raised by hand, and given warm milk. When two months old he had two cows appropriated to his use. Until two years old he daily drank the milk of two cows. He was a great horse and sire.—EDS. MARYLAND FARMER.]

A LEADING farmer in Middle Tennes- see, states that a crop of 10 acres of am- ber cane was of more value to him for feeding hogs, cattle and mules, than any 25-acre crop on his farm, and that it paid better than any other crop. Those who have had the most experience claim that the amber cane is twice as nutritious as common field corn, and yields nearly double the amount of the best varieties of the sweet corn usually sown for fodder.—*St. Louis Journal of Agriculture.*

POULTRY HOUSE.

Poultry Houses.

We have seen hundreds of houses for keeping small and large quantities of poul- try, but we never saw a cheap house, bet- ter adapted to keeping a large number of fowls than that of Mr. W. H. Whitridge, of Baltimore county. It is commodious, economical, airy and so arranged that dif- ferent breeds and birds of all ages can easily be separated in divisional compart- ments. The extreme cleanliness of this henry is exceptional. The arrangements for sitting, laying, young, and fattening fowls; for feeding and watering and gen- eral comfort of the fowls; and for health and protection of these important adjuncts to the profits of the farm and agreeable comforts of the family, are all admirable. Mr. W., at present, keeps only the pure Plymouth Rocks. We understand that

he will gradually introduce other pure breeds, and perhaps ducks and geese. Mr. W.'s poultry ought to be fine, with such a wide range as his farm affords, and the appliances of such quarters and generous feeding as he furnishes. It may thought to be behind the times, but we somewhat prefer on a large farm a number of plain lodges, far apart, than one large costly building for a variety of fowls and each sort in large numbers. We remember in our boyhood days, how healthy and profitable were the fowls—barnyard or common and the game. The cost of keep was small, or indeed, amounting to nothing—the waste grain, etc., that otherwise would have been lost being nearly all that was furnished for their maintenance. Eggs were plenty in winter, and chicks in summer. The houses were small hovels or log huts, well chinked and daubed, and covered over with dirt and sods, often presenting a growing crop of grass, weeds or corn on the top. The range of the fowls was of course extensive. These huts were one or two hundred feet apart, and only two or three at each dwelling or “quarter” of the negroes, and these quarters were often a half mile apart. These houses for poultry were warm in winter, and cool in summer by knocking out the chinking in places, or the fowls on hot nights rested in the adjacent trees along with the guineas and turkeys. There was in those days no such thing as *cholera* or *roup*. Those that were wanted for the table were caught at night and put in fattening coops, and there stall-fed on the cleanest and best of diet for 10 days, when they were killed, or if not wanted, turned out to make room for another set, as it was thought that after ten days of close confinement and luxurious living, they were not in prime condition and would lose in flesh unless turned out and allowed a spell of liberty for a few days, after which they were perhaps subjected to the same routine, which was continued until they were demanded as a sacrifice to the gourmands of the table.

For the Maryland Farmer.

Shells and Bone.

Oyster shells and bones are a real necessity to poultry, and especially so to those which are kept in confinement, and there has been found nothing which will take their places. Plenty of oyster shells can be gotten for the asking, and these should be either pounded up, as they are needed, using a large, flat stone and a heavy faced hammer, or else they should be partially burned—calcined in the fire—a good time to do this being when a lot of brush is burned on the place to get rid of it. It should be kept in shallow boxes or troughs, under cover, where the fowls can get at it at all times, and will go far towards preventing soft shelled eggs, which are so frequently found from hens kept in confinement. When not burnt-uncalcined, it is not necessary to keep it under cover, though it may be as well to do so. Where it is too much bother and trouble to do so, or when the flocks are so large as to make hand work of the kind very laborious, crushed shell can be bought in quantity, from almost any dealer in poultry supplies in our large cities, and costs comparatively little, the greatest part of the expense being in the crushing or grinding.

Bone is invaluable for poultry, in furnishing the wherewith to maintain health, strength and productiveness. The fowls are very fond of it, indeed, and while they greedily devour it, it is not so apt to prove injurious, when fed in liberal quantities, as is meat, either cooked or uncooked. The great trouble, however, is in reducing the bones to a size which can be eaten by the fowls. They cannot be broken with a hammer while they are “green,” or full of moisture, and must be stored away for weeks until they become dry, or else dried in a fire or in an oven.

Where *pure*, strictly pure bone meal—coarse—can be bought, it pays to do so, but so much of the bone now sold is so grossly adulterated as to be comparatively valueless for poultry food. When bought it should be seived, the coarse being put in shallow boxes, under cover, where the fowls can get what they wish, and at pleasure, and the fine can be used as a fertilizer for vegetables, or can be fed mixed with corn meal to the poultry. There is now a cheap and good mill made especially for crushing

and grinding bone and shells for poultry food. These mills will last many years, and cost only \$5 for those without legs, being fastened to a bench or plank, when used, and \$7 for those supplied with legs made especially for the purpose.

D. Z. EVANS, JR.

White-Crested Black Polish.

Mr. Hewitt, an Englishman and successful breeder, says of this variety: "The striking contrast of the white-crest, and in highly bred specimens, the beautiful iridescent character of the general plumage, never fails to attract the attention and to elicit the admiration of even such individuals as do not make poultry culture a matter of either amusement or profit. These fowls certainly were one of my most favorite breeds for a number of years, and few persons who have given them a fair trial report of them otherwise than most favorably. It must, however, be constantly borne in mind that the fully successful Polish must enjoy a very dry run, for if kept on a wet, cold subsoil, where the rain lies long on the surface, they soon become unhealthy, and are perhaps more difficult to cure when disease overtakes them than any other breed of fowls with which I am acquainted. A gravelly or sandy soil, therefore, suits them admirably. Though not large, they are good flavored, plump fowl on the table; and as to the production of eggs, few if any excel them."

A VALUABLE grain to feed chickens during the first three weeks of their lives, is Golden Millet. Very small chicks need small seeds. They constantly search for the seed of grass or any small seeds. Nature is the best teacher. Small whole seeds are the best things in the grain line that can be fed to very young chickens. Millet is useful when they are too small to swallow Pearl Dwarf Corn.—*Hartford, Conn., Poultry Yard.*

Our Farmers' Olio.

INSECTS.—The great increase during the past thirty years, in the variety and number of insects which destroy the farmer's crops has made it necessary for purposes of defence, to purchase and have upon

the premises some very active poisonous agents, mineral and vegetable. Among these may be named Paris green, for destroying potato beetle; hellebore powder for the currant worms, rose bugs, etc.; and strychnine, for crows, blackbirds, etc., in cornfields. These comprise some of the most potent and deadly poisons known to science. By far the most dangerous is Paris green, because it has come into such general use that it is found in almost every farm-house in the country. Now it is a well known principle in human conduct that familiarity with danger engenders indifference, carelessness and negligence, and consequently, however timid and cautious one may be in the first handling of dangerous implements or agents, in the course of time extraordinary safeguards are not thought of, and great recklessness succeeds extreme caution.—*Journal of Commerce.*

DON'T kill the toads, the ugly toads that hop around your door. Each meal the little toad doth eat a hundred bugs or more. He sits around with aspect meek until the bug hath neared; then shoots he forth his little tongue like lightning double geared. And then he soberly doth wink and shut his ugly mug; and patiently doth wait until there comes another bug.—*Indianapolis Farmer.*

A SOUTHERN writer says that if in a flock of 20 to 150 sheep, fourteen to sixteen bells of various sizes and pitch are placed, no sheep killing dog will dare to attack them. It is, he affirms, the variety of tone that terrifies the dog. This is important, if true, as showing that the dog has a musical ear and cannot bear discords, except of his own making, such as when he "bays at the moon" after everybody in the neighborhood has gone to sleep.

ACCORDING to Dr. Edward Smith, in his treatise on "Food," an egg weighing an ounce and three-quarters contains 120 grains of carbon and $17\frac{1}{4}$ grains of nitrogen, or 15.25 per cent. of carbon and 2 per cent. of nitrogen. The value of one pound of eggs as food for sustaining the active forces of the body is to the value of one pound of lean beef as 1584 to 900. As a flesh producer one pound of eggs is about equal to one pound of beef.

MARYLAND FARMER

A STANDARD MAGAZINE,

DEVOTED TO

Agriculture, Live Stock and Rural Economy.

EZRA WHITMAN, Editor,

COL. W. W. W. BOWIE, Associate Editor,

141 WEST PRATT STREET,
BALTIMORE, MD.

BALTIMORE, OCTOBER 1st, 1882.

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THE MARYLAND FARMER is now read by more Farmers, Planters, Merchants, Mechanics and others interested in Agriculture, than any other magazine which circulates in the Middle or Southern States, and therefore is the best medium for advertisers who desire to extend their sales in this territory

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The subscription price is very low, and we think any farmer merchant or mechanic would find it worth to him ten times its cost. As an extra inducement, we will send (free, as a premium,) to each subscriber, one of the following valuable books as he may select, viz:—

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EZRA WHITMAN.

COL. D. S. CURTIS, of Washington, D. C., is authorized to act as Correspondent and Agent to receive subscriptions and advertisements for the MARYLAND FARMER, in the District of Columbia Maryland and Virginia.

Our friends can do us a good turn by mentioning the MARYLAND FARMER to their neighbors, and suggesting to them to subscribe for it.

Our October Fair Number.

It gives us some pleasurable pride to call the attention of our readers to this number of the MARYLAND FARMER. Intended to be worthy of preservation by any one who may be fortunate enough to possess a copy, we have studiously aimed to fill its pages, enlarged in this issue, to nearly double the usual reading matter, by useful tables and statistics for reference by farmers. The original articles which are numerous and upon varied subjects, are written by the best and most practical writers we could find, and their sensible writings will be of immense value to our farming community if carefully read and considered.

This number will be largely distributed at the several agricultural fairs in the country, at large, and thereby the many useful facts recorded in this number, and the many advertisements of machinery, stock, &c., to be found within the advertising columns will be read by thousands who are not subscribers, but whom we hope will soon become so, upon seeing the great value of the MARYLAND FARMER as an honest exponent of the interests of farmers and the principles that should govern those who desire to follow the most honorable and independent calling known to mankind. Our aim has been and will continue to be, the medium through which the best information upon practical subjects can be given by the testimony of farmers of their experience, and of the men from whom the best stock can be procured, as also where there is to be had the most approved labor saving machinery.

With the MARYLAND FARMER in his hand, and its instructions strictly followed, we venture to say that no intelligent farmer can go amiss in his undertakings, let them be horticultural, stock breeding, grazing and feeding, or in general farm production. The MARYLAND FARMER caters to no particular interest or cliques, confines

itself to no "pent up Utica," but occupies national space and embraces all departments and interests connected with an improved and progressive Agriculture.

The Oriole Pageant and Lord Baltimore.

The arrival of Lord Baltimore gave us the opportunity, as loyal subjects, to send our embossed card and a copy of the MARYLAND FARMER to the great Founder and Owner of the Province of "Marie-land." We are assured that his Lordship, condescended to return his thanks for this evidence of our loyalty, and was further moved to say after a critical examination of our Agricultural Monthly, that after his long absence from his American Dominion, he was startled every hour with the evidence of the growth of his colony in population, wealth and power; in the general prosperity of the people and their advance in all the arts and sciences, calculated to make a people happy and contented. But of all the manifestations of progress, he had not had a greater proof afforded him, of the advanced state of Agriculture, which he considered was the life of all other employments, than that which he recognized in the elegant and practical MARYLAND FARMER, which he had received and which he should treasure and often refer to as evincing the lofty position his people had attained in its agricultural pursuits during his long absence.

THE PIMLICO RACES.—The Fall Meeting for 1882, of the Maryland Jockey Club will be held at the Pimlico Race Track, commencing on the 17th, and ending the 20th of October. Be it remembered that at this meeting the club offers a grand total of \$14,500 in money, which will attract the finest horses in the United States as competitors for the different States. This club has at every meeting increased its popularity. The time for their Fall Meet-

ing is propitious for good weather and suitable to farmers and merchants. The farmers have finished, or nearly so, their pressing labors of the year, and the merchants are laying in their fall and winter supply of goods and making arrangements for winter orders for merchantdize. Thus both classes can unite pleasure and business by visiting the city during race week. The grounds and grand stand are always blazing with the beauty and fashion of the city, while the fair representatives of our unsurpassed rural maidens never look more charming than surrounded by admirers on the grand stand, when they are animated by the stirring scenes occurring on the course which is spread out at their feet as a beautiful panorama full of joyous life and excitement. Come one, come all, to the Pimlico races, if you want to enjoy rational pleasure.

SINCE our last issue of the MARYLAND FARMER, Engineer-in-Chief, Wm. W. Wood, U. S. N., lost his life by drowning, in Smith's Creek, in St. Mary's county, Md. The deceased was the owner of a splendid estate at St. Ingoes, where he resided a part of each year. His residence known as Jutland, is beautifully situated, commanding a fine view of the Potomac, and is surrounded by large fields of fertile soil, highly improved and cultivated. Col. Wood was in our office only three days before his accidental death, and in high health and spirits. His sudden death tells the dreadful truth, that in "the midst of life we are in death." He possessed all those manly traits that so endeared him to all his friends, and they were legions. We greatly deplore his death, and can truly sympathize with the farming community in their great loss, of one who was a practical, theoretical and enthusiastic cultivator of the soil, and who, both by precept and example, did so much to illustrate and assist the progress of agriculture in all its branches. His loss is a great calamity.

ANNUAL MEETING OF THE NATIONAL COTTON PLANTERS' ASSOCIATION will be held at Little Rock, Ark., during the week beginning October 17, and in connection with the Arkansas State Fair. The last meeting of this great and important association, it will be remembered was held at Atlanta during the Exposition of Southern industries of 1881; which attracted so much attention, and commanded the applause of the whole country.

THE AMERICAN AGRICULTURAL ASSOCIATION will hold its third Annual Convention at the Grand Pacific Hotel, Chicago, commencing wednesday, December 15th, 1882, and continuing three days. Addresses will be delivered and papers read by the ablest and best known agriculturists, scientists and public men of the country. Questions will be discussed relating to agriculture and kindred topics.

Reduced rates of fare are expected from the different lines leading into Chicago, and it is designed that this shall be a worthy successor to the conventions already held by the Association, the first in 1879, and the second in February 1882, in New York City. Every farmer, and all interested in agriculture are cordially invited to attend.

Membership in the Association \$3.00 per year, including the registration fee, and entitling each to free admission to the Association's proposed exhibition, to be held next year, and to all its publications, including the *Agricultural Review*. J. H. Reall, Esq., is the Secretary. His address is 19 University Place, New York.

PERSONS who subscribe now, or before January next, will have the "Farmer" mailed to them from the time of subscription to January, 1884, for \$1.00, inclusive of one of the several liberal premiums offered.

Our Northern Trip.

The lateness of our return from the seashore at the North, prevented any extended account of our trip, in the September number, and therefore we may be pardoned for again referring to it in this issue, so far as to express the great gratification and enjoyment experienced in meeting so many old friends. We first stopped for a few days at "Old Orchard," on the coast of Maine, and about twelve miles from the city of Portland. Here the sea bathing is unsurpassed, and the air healthful and invigorating, which we enjoyed in conjunction with the ample accommodations of Hotel Fisk, and delightful interviews with old friends, and the many visitors.

We left there for a tour in the interior of the State, first visiting Portland, which we think one of the most beautiful cities in this country. Here again we met many valued friends, amongst whom was the family of the late Col. Thos. O'Brien, who at one time was our near neighbor in Baltimore, which made us feel at home at their beautiful residence in that city. One of the sons of the colonel is extensively engaged in the coal trade, to whom we were greatly indebted for kind attention to us and our family.

Our next move was to accept the invitation of the family of our old friend Dr. James B. Fillebrown, where we were delighted to find associates of half a century ago, so pleasantly enjoying good spirits, health and prosperity. At the dinner table, so bounteously spread before us, our attention was arrested by seeing a large and elegant china pitcher on the table, and knowing we were in a land where "local option" prevails, our curiosity was excited to know its contents, or why it was made so prominent an object. It was explained to be an old family relic highly prized, bearing the names of Samuel and John Adams, and was preserved as a memento

of the intimate relations that existed between the Adams and Fillebrown families in the olden days. On a closer examination we found this pitcher as a curiosity and relic, worthy of a place in the National Museum at Washington. It is made of the finest china ware and elaborately carved and decorated with devices and patriotic emblems. On the front is a spread eagle with "E. Pluribus Unum" above, and below "Anno Domini, 1802. A curved line surrounds this with thirteen stars representing the then thirteen United States, with also the memorable words of Thomas Jefferson—"Peace, commerce and honest friendship with all nations. Entangling alliances with none." One of the sides has the National flag, with an eagle on top of the staff, a Continental officer in uniform, cannon and cannon balls, and opposite is a farmer plowing, while ships on the ocean are seen in the back ground. On another side are two circles, each with a blazing sun, and the name of Samuel Adams in one and that of John Adams in the other. Above these circles is a weeping willow overhanging an urn—"In memory of Washington and the proscribed patriots of America." Below the circles is the Horn of Plenty. Among the many sentiments which appear upon this wonderful pitcher, we take one or two only—"Success to America, whose militia is better than standing armies." "May its citizens emulate soldiers, and its soldiers, heroes, while Justice is the throne to which we are bound to bend—our country's rights and laws we ever will defend."

After visiting Cape Elizabeth and the surroundings of the lovely Forest city, we left for Winthrop and Augusta. At these places we met many old friends and acquaintances, and made several pleasant calls on merchants, editors and others, which will not soon be forgotten by us. There was one scene which occurred in Augusta that must not be left out. As we

were standing on the sidewalk near the post office, we heard our name called from a carriage—the voice was familiar—and turning, we met our old friend of over 45 years ago, Rev. Dr. G. W. Quinby, editor of the *Gospel Banner*, widely known as an author, pastor and editor, still in vigorous physical and mental development. It was truly gratifying to see how gently time had dealt with one to whom our early remembrances of brotherly kindness still cling, increased by the many years that have passed since first we met.

We close this desultory sketch of our Northern visit with the grateful acknowledgment of the flattering manner in which many of the leading journals of the old "Pine State," have lately spoken of us and the MARYLAND FARMER. W.

WINTER OATS.—Mr. Wm. L. Bradbury, Nason, Va., sends us a sample of the winter rust-proof oats advertised by him in the MARYLAND FARMER. They are good-looking brown oats, very heavy, and evidently an excellent variety for warm latitudes. The demand in the Middle and Southern States for winter oats is rapidly on the increase, and it will no doubt repay any ordinary expense in procuring the seed and cultivating them. The Southern plan of sowing oats late in Spring, has always resulted in producing a small yield per acre of *light-weight* oats—usually below the legal standard of 32 pounds per bushel. What a gain to the farmer if he can grow oats of 40 pounds to the bushel, and more bushels per acre by sowing in autumn instead of the spring. The price of these oats are \$1.50 per bushel of 32 pounds per bushel.

THE NATION'S CHARACTERISTICS.—Shrewdness and incredulity are the predominant characteristics of the American people. They will take no stock in an article unless it is meritorious. When Dr. Swayne launched his Ointment for the Piles, that itch so intensely at night on a sea of human suffering, the physicians laughed, but the people tried it all the same and manifested their approbation in a National endorsement. Now the allopaths and homöopaths are laughing the other way. This world is full of reverses.

Good News for Tobacco Growers.

The Spanish Governments will purchase this month 6,000 hogsheads of Maryland *common tobacco, of the last crop*. This is an article which has been of late years a drag upon the market, and a drag upon the sales of better quality of the weed. Here is a chance to empty our over-loaded warehouses of this stuff. It has been a long time since we have had a tobacco trade with Spain. Now that she has become at once a liberal buyer to a large amount, do not let us kill the goose that lays the golden egg by demanding such preposterous prices as will frighten off this new customer and lose her custom forever, but be wiser, and sell at such a price as may induce further demands, while even a small advance on the past offerings—with seldom takers—will be a great help to the planter who has held on because he could not sell at any price, and will be a happy relief to the market in ridding itself of a nuisance and making a void for better qualities to fill. In this connection it is noteworthy, and congratulatory that the crop of Maryland tobacco declined 8,000 hogsheads last year, 1881, and that grown in 1882 will be still less, showing a steady decline. We have long predicted that when the crop of Maryland tobacco has been reduced one half its quantity in pounds, it will yield to the average grower double in money that it has heretofore.

Fairview Farm in Prince George's Co., Md.

FAIRVIEW is the residence of Ex-Governor Oden Bowie, where we recently paid a short visit, made exceedingly pleasant by the warm welcome and elegant hospitality extended us by the Governor, his estimable lady and their charming family. This well-known homestead once so familiar to us, we had not seen for ten years, and were astonished to see the improved appearance of the house and grounds, and the wonderful improvement in that time,

in fertility of the soil and general outlook of the big fields of this large estate. But we must defer, owing to a press of time in making up this extra large issue of the FARMER, until next month, to tell our readers about the luxuriant heavy crops of corn and tobacco, the fine stock of thoroughbred horses, herds of cattle and sheep, and what else we saw and learned, as to the daily routine and general management on the farm, all of which we think will interest and instruct our readers.

State Fairs in 1882.

Am. Institute.....	New York..	Sept 27-Dec. 2
Alabama.....	Montgomery....	Nov. 13-18
Arkansas.....	Little Rock.....	Oct. 16-21
Canada, Central.....	Guelph.....	Oct. 3-4
Chicago Expos'n.....	Chicago, Ill	Sept. 6-Oct. 21
Cincinnati Ind. Ex.....	Cincinnati.....	Sept 6-Oct. 7
Illinois Fat Stock.....	Chicago.....	Nov. 16-23
Indiana.....	Indianapolis.....	Sept 25-30
North Carolina.....	Raleigh.....	Oct. 16-21
St. Louis.....	St. Louis, Mo.....	Oct. 2-7
South Carolina.....	Columbia.....	Nov. 14-17
Texas.....	Austin.....	Oct. 17-21
Virginia.....	Richmond.....	Oct 25-27

COUNTY FAIRS.

MARYLAND.

Baltimore.....	Timonium.....	Oct. 3-6
Cecil.....	Elkton.....	Oct. 3-6
Frederick.....	Frederick.....	Oct. 10-13
Harford.....	Bel Air.....	Oct. 10-13
Montgomery.....	Rockville.....	Oct. 18-20
Washington.....	Hagerstown.....	Oct. 17-20

VIRGINIA.

Frederick.....	Winchester.....	Oct. 11-14
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WEST VIRGINIA.

Piedmont.....	Culpeper.....	Oct. 18-20
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Fairs that are Over.

Kent County Fair closed its annual meeting on the 14th of Sept., having had a fine exhibition, which proved a financial success. We congratulate old Kent upon the event.

THE NEW ENGLAND FAIR held its 19th Annual Fair at Worcester, Mass., from September the 5th to the 8th, inclusive. Taking all things in consideration, it proved probably the most successful of all the previous notably successful ones this old

Association has ever held. While some departments were not as full as heretofore, they proved more select, and all parts of the exhibition were well deserving of notice. The feature of this Fair which attracted much attention and is worthy of great consideration by farmers everywhere, particularly in the South, was the display of working oxen. Here were exhibited yokes of old oxen, perfectly broken to haul or back incredible loads, and young two and one year olds, trained to obey command by word or sign as if they were as intelligent as Coolie dogs. Is there not lost to the Southern and Middle States farmers much animal power by not imitating more the habits of Northern men in the use of oxen on the farm, beginning their education when calves? It is the pleasure of the boys to *break*, or rather educate the calves to labor, and as they grow to three years they are ripe for valuable farm work as oxen, docile, obedient and almost as useful as horses, less expensive to keep and far more valuable in old age, for as they grow in age they grow in size, and no longer fit for service—unlike the faithful horse—are valuable for the shambles. This one great feature of this exhibition alone should attract Southern farmers that they may learn a lesson which may benefit their system of farming.

We cannot close this notice of this grand old society without adding what is said editorially by the able and practical Massachusetts *Plowman*, in speaking of its 19th meeting: "The future of the New England Agricultural Society is without a cloud in the horizon. * * * *

Especially has it reason to cherish a worthy pride in its executive officers, who by their long and unrelenting efforts, their remarkable earnestness and assiduity, and their unselfish sacrifice have held up the society's standard of character at the highest mark, and maintained it without faltering. President Loring has been the representative head of the society from its birth; his name has since become a na-

tional one, and the honor it continues to earn is reflected on the society to which he clings with even more than the old time devotion. Secretary Needham has labored in season and out of season, early and late with tongue and pen, for the promotion of the society's interest, and today experiences profounder satisfaction at what has been achieved than he could feel for any other kind of enterprise whatever."

CORRECTION.—We should have given credit to "C. W. K., Chestertown, Md.," correspondent of the *Country Gentleman*, for the article headed "German Potash Salts." It was an inadvertence, we regret.

Statistical Agents.

Our thanks are due to the old and sterling Upper Marlboro *Gazette*, for the following high compliment to our Associate Editor:

"We learn from the Massachusetts *Plowman*, the official organ of our Agricultural Commissioner, Dr. Loring, that in applying the appropriation recently made by Congress the Commissioner has decided to appoint a Statistical Agent for the Department in each State and Territory in the Union. The duty of each agent will be to collect information from the most reliable sources; to correspond with boards of trade and agriculture; to secure statistics of agricultural products, and make a monthly report to the department. In collecting information the agents will have the benefit of the county correspondents who collect statistics for the department. The appointment of agents for several States has already been made. For Maryland, Col. Walter W. W. Bowie, the Associate Editor of the MARYLAND FARMER, has been selected. It seems almost unnecessary to add, that in making this appointment, Mr. Loring has selected a gentleman as well fitted in every way for this important office as could be found in the State. He has been a practical farmer and is a man of excellent judgement and discernment, all requisite qualifications for this position. We congratulate him and the Department upon his appointment; coming as it does unsolicited it is no little compliment."

The Movement in Favor of a Grand Annual Baltimore Industrial Exhibition.

As early as last January, after our visit to the Atlanta Exhibition, having seen the vast advantages that would result to the South from that exhibition, we suggested in our columns that a similar scheme be adopted by our people by which the resources of Maryland would be developed and placed before the gaze of the world. Thus following the examples of Boston, St. Louis, Atlanta and other enterprising cities of the United States.

We are glad to see that our people are beginning to embrace our suggestions, and that it is likely to be carried into a practical success. What we said then we now repeat:

"We therefore suggest that the liberal merchants, mechanics, artisans, manufacturers, and capitalists of this city and State shall call a meeting at some early day and pass resolutions to organize an association for the purpose of holding in this city a grand Exposition, which would reflect the true resources and advantages appertaining to this city and State. Let every organization of the city, every association and club send a delegation to this meeting or convention, and let the State and County Agricultural Societies send each a delegation. Every farmer, planter, miller, miner, manufacturer and man who feels an interest in the welfare of the State or city, attend and consult together and have during the coming autumn a great exposition of the varied resources of our State, showing all the various advantages that a home in Maryland possesses. It wants but the will and a little energy on the part of our people to accomplish this important object."

We now make the further suggestion, that a call should be made in the daily papers, by the friends of the enterprise, for a mass meeting of the citizens of Baltimore that the subject may be fully ventilated by open discussion, and active, working committees be appointed to can-

vass the city to see how much stock would be taken, and report the result at some future meeting when the organization could be perfected. We think a mass meeting would put more vim and activity into the movement, and make the association to be formed, more independent and popular, than if formed by delegates from the different organizations of trade, etc., alone. We must have the whole popular heart in such a great step toward State and city progress.

South Carolina Rock and Kainit for Wheat and Clover Crop.

MANTUA, Sept. 20th, 1882.

Messrs. Editors of Maryland Farmer—

Finding my articles published in your periodical have attracted much attention from your subscribers and exchanges, and that I am each mail called upon to answer letters of inquiry respecting the fertilizer I use, I take the liberty of requesting sufficient space in your October number to publish the following, which will reach more persons than my private letters and save a disappointment to those whose letters do not reach me.

Referring to the use of South Carolina Rock and Kainit, I find from 1500 to 1700 lbs. of South Carolina Rock, rich in phosphoric acid, and from 300 to 500 lbs. of Kainit, with a large percentage of potash, to make a ton of very superior fertilizer. I apply of this combination from 200 to 400 lbs. per acre, according to quality of land. I use it with good results on light, medium and stiff soil, and for two years have been purchasing of Messrs. Bowen & Mercer, 72 Exchange Place, they furnishing it manipulated and ready for the drill.

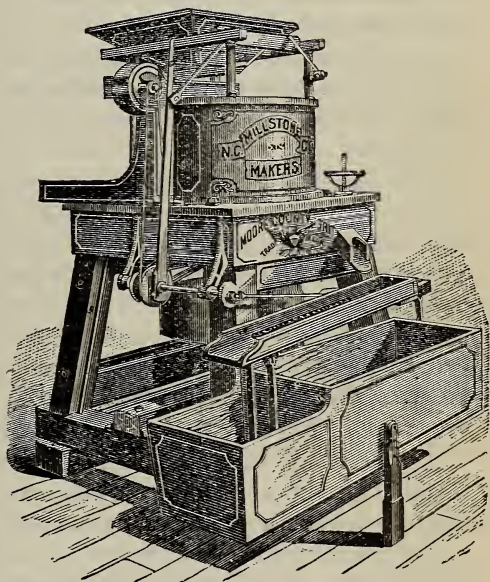
Very respectfully yours,

T. R. CRANE.

SIR ROBERT CHRISTISON, Physician to Her Majesty the Queen of England, speaking of the Coca plant says, "The properties of this wonderful plant are the most remarkable of any known to the medical world. From repeated personal trials, I am convinced that its use is highly beneficial and tonic." To build up a broken down system, use the Liebig Co.'s Coca Beef tonic, indorsed and recommended by the foremost physicians of Europe and America. Overwrought and feeble nerves are quieted, digestion is promoted and new tone and vigor in all of the organs of the body follow its use.

Moore County Grit Mill Stones.

It is not generally known that all mill stones are not fit to grind corn into meal for table use. At present there are but four stones commercially known in the world adapted to this purpose—French burr, German cologne, Esopus stone of New York, and best of all, the lately discovered Moore County Grit, of North Carolina. We have before use a specimen of this remarkably hard, silicious grit stone, which Prof. Kerr, of North Carolina, says, "Is the only strata yet discovered in this country."



In 1879 the entire vein and a large tract of land were purchased by J. E. Taylor, President of the Taylor Manufacturing Company, of Westminster, Md., and a stock company formed under the name of "North Carolina Millstone Company." This company has gradually developed the quarries, and have quite a little village in the woods, sixteen miles from nearest railroad. They are now employing about forty men in quarrying stones of all sizes, and in the manufacture of two sizes of corn mills, 30 and 36 inches in diameter.

It is claimed for this grit that, from the peculiar formation of the stone, it will grind longer without dressing than any other; its peculiar nature—a cement mixed with flint—causes it to wear sharp and not glaze. In some cases a 48-inch pair of stones has ground over 4,000 bushels with one dress; a 30 or 36-inch stone will grind from 1,500 to 2,000 bushels with one dress. They hold their edge to a remarkable degree, and the meal is very round and light.

A bushel of corn will make from one bushel and ten quarts to one bushel and fourteen quarts of meal, and the meal is very light, and superior for table use. It is also claimed that less power is used to grind a given number of bushels with this burr than with others, on account of its sharpness.

The cut represents a 30-inch Moore County Grit upper runner mill, with silent feed, exhaust fan, sifter, and meal box. The sifter can be detached at will when not desired, and so can the fan. The corn is fed through eye of fan into a funnel that delivers the corn on the under stone and prevents any tendency to chock in the eye, even if speed varies.

It is claimed that a 30-inch Moore County Grit Mill will grind 6 bushels, and the 36-inch 8 bushels per hour, into as fine meal as can be made on any water or stationary mill. If the fineness is decreased, of course, quantity is increased. For chop or mixed grain double the quantity named can be produced.

It is a subject of congratulation to know that this useful enterprise is a Maryland institution, and to know that by the use of these mills with this particular grit that the bulk of one bushel of corn can be increased to one and a half bushels when ground into nice meal, fit for making into light wholesome corn bread. Hence, in this State and the South, where good table meal is appreciated, the manufactur-

ers have done a large trade. They are sending stones and mills to all parts of the country. This industry seems destined to grow to large proportions, as the vein of the stone is practically inexhaustible. We have seen some of the meal ground by these mills, and found it smooth, fine, and more beautiful for corn bread than any we remember to have seen. See the advertisement of the North Carolina Mill Stone Company in this number of the FARMER.

Seed Wheat—The Golden Prolific.

We have received a small sample of this beautiful bearded white wheat from Messrs. Johnson & Stokes, seedmen, 1114 Market street, Philadelphia, Pa. This wheat originated in northern New York, and was selected as the best from the results of eighteen experiments in Hybridizing different varieties. Large handsome, white berry, having a very slight amber tinge. It is said that it yielded this season with ordinary cultivation, 46 bushels to the acre, while the Clawson and Mediterranean on the same farm, with same cultivation, yielded but 24 and 27 bushels respectively. Very stiff straw, standing well, free from rust, ripening early, bearded and extremely hardy, having been grown the past season, in competition with other wheats in northern New York and Canada, and pronounced the hardiest of all. It would be, no doubt, advantageous to our farmers to try this new variety of white bearded wheat. In accordance with our custom, we do not recommend farmers to dip deeply in any new invention or new variety of seeds or plants, but we have, and do now, advise them strenuously to try new varieties of plants upon a scale limited in proportion to this means, for on such a scale they can never lose, and may be largely benefitted by striking a bonanza.

In Harford county, Md., the raising of corn for canning is said to pay \$75.00 per acre.

Commercial Fertilizers.

As this is the season when fertilizers are in demand, and purchasers are laying in their autumn supplies, we call the attention of all such, to the following manufacturers and dealers in the various kinds of manipulated manures that are for sale in this city:

J. J. Turner & Co.,
Slingluff & Co.,
R. W. L. Rasin & Co.,
R. J. Baker & Co.,
P. Zell & Sons,
Joshua Horner, Jr., & Co.,
The Chesapeake Guano Co.,
E. B. Whitman,
J. Q. A. Holloway,
John M. Rhodes & Co.,
John S. Reese & Co.,
Symington Bros. & Co.,
Wm. Davison & Co.,
Brown Chemical Company,
Bower & Mercer.

Read the respective advertisements of these gentlemen in the MARYLAND FARMER. Each one and all are reliable dealers, and farmers buying from either of them, we feel sure will obtain each article purchased just as it is represented to be. Their long established high character is our guarantee for our endorsement of them as trustworthy manufacturers and dealers. We were aware that the immense fertilizer trade of Baltimore was on the increase, but were astonished to learn from Mr. Dunan, who is thoroughly posted in such statistics, and also from others who know the extent of the business, that the proportions of the trade have this year greatly been enlarged to at least 25 per cent. More fertilizers have been ordered this autumn than ever before, and the demand is already far ahead of the supply. This speaks loudly for the general prosperity of the country and for the confidence reposed in our Baltimore manufacturers of fertilizers.

Thomas Walter, of Montgomery county, Md., raised 105 bushels of wheat on two acres.

Gleanings from Our Exchanges.

Mr. Sweeny, of Prince George's county, has this year grown a canteloupe weighing 26 pounds. Who can beat that?

The cannery of S. T. Earle & Son, at Centreville Landing, will probably put up 125,000 cans of fruit this season.

Mr. Henry C. Mumma, of the Sharpsburg district, Washington county, Md., raised this year 452 bushels of wheat from $9\frac{1}{2}$ acres of land, an average of about 46 bushels to the acre.

Greensborough, Caroline county, Md., has two large canning establishments, each with a capacity of 1,000 baskets daily, and together giving employment to 600 persons. It has six evaporators with a daily combined capacity of 750 baskets. It boasts also a saw-mill and basket factory.

Samuel T. Earle's cow, Valma Hoffman, of Queen Anne's county, Md., has produced in thirty days over 87 pounds of butter, or nearly three pounds a day. She is valued at \$5,000. This famous butter cow we spoke of in our last number, and gave to her the name of "Valena." It should have been as above, *Valma*.

**The Great Sale of Imported Jerseys by
T. S. Cooper.**

We call attention to this important sale to take place in New York, Oct. 4, 1882. See advertisement in this number of the FARMER. This is perhaps the most attractive sale of this now most popular butter-breed of cattle in the world. At this sale some of the best and most famous members, or their near relations will be offered, and we hope our Maryland breeders of Jerseys who now stand on the top round of that ladder, will be in attendance and see that, if the persimons are better than we have at home, they are not knocked down by any longer pole than a Maryland one.

THE DAIRY.

For the Maryland Farmer,

Sweet Cream Butter.

However, the chemist may decide the matter, and whatever his opinion may be as to the keeping qualities of sweet or sour cream butter, the taste of the public will decide what course the dairymen will take in supplying what the consumer may demand; the drift that is now pronouncing in favor of sweet cream butter, may within a half decade, or even less time, surge back towards acidity, and the dairymen will supply the demand for the other. While the popular taste will always have to be *catered* to, yet it does not prove that one article is better than another, simply because there is a greater demand for the one than for the other; but in this case there does seem to be a reason why sweet cream butter is preferable to that made of sour, or acidulated cream. In proof of this, it may be cited that Prof. Voelcker has, after a long series of tests, announced that when the proper conditions are observed, and sweet cream is handled by a method in accordance with its needs, rather than by ways that have a tendency to detract from its value. It has superior keeping qualities, and unapproached aromatic flavors, and now an emphatic endorsement to his conclusions, comes from Profs. Kedzie and Babcock, names in themselves a guarantee that they have well grounded reasons for their belief in this matter. It may not be amiss to also mention that the finest butter made to-day in this country, is made from morning milk, cream extracted, butter churned, worked over, packed, sent to market, sold, and finds its place upon the dinner table the same day, a half-day covering the entire operation. How shall this butter be made to have good keeping qualities, and possess a fine, nutty flavor. It is evident that there must be a departure from the method usually followed in making acid butter, and it is in this imitation that failure in making sweet cream butter has resulted, hence the cream must be raised at a temperature not to exceed 56 degrees, and the cream removed

as soon as separation is complete. If deep setting cans are used, there is an exclusion of air which will operate against fine flavor, which must be remedied by often contact with the air. The centrifugal cream extractor that whirls the cream into a foam as it is thrown over the disk of the rapidly revolving cylinder driving the air through, and through it produces a high flavored butter, and may be given as proof that it is not acidity that gives flavor, but the action of the oxygen of the air coming in perfect contact with the cream, and by uniting with some of the less volatile oils produce aroma, or nutty flavor. The old advice to stir cream frequently before churning was a "blind" grasp at this very idea, and this longer exposure gave the air a chance to penetrate the cream, and produce in, though a less perfect way what the centrifugal gave in perfection at the start. In another particular there is, or should be a wide difference. Sweet cream should be churned at about 52 degrees to obtain a perfect "aglutination" of the buttery particles. Cream that has been subjected to the action of acid, has had this force of adhesion—one particle of butter attaching itself to another—partially destroyed, and it can only be recovered by the agency of heat, while this heat needed of one, if applied to the sweet cream; will prevent adhesion or even tend to cause the cream to revert back to its original liquid condition, and when churned we say, "the cream did not more than half come," which is actually true, but it would be a fault of our own in not understanding the conditions that govern the two cases. The whole matter is one that can be made plain in a line. Can the action of acidity which is the first step towards decay, be superior to the influence of the oxygen of the air, in promoting aroma, and fitting butter for long keeping? Undoubtedly butter from sour cream will always be made and find sale, but that it is the superior of sweet cream butter, may not pass unchallenged.

Ohio, July 20th, 1882.

J. G.

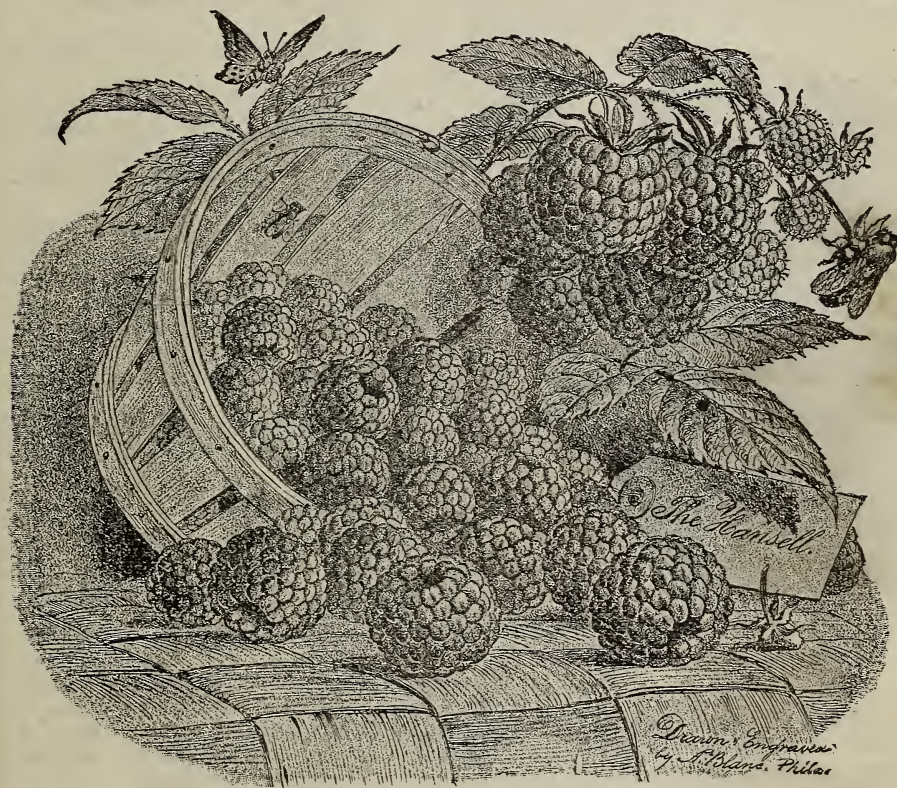
An Important Errata.—On page 318 of this number, line 10, an error occurs by which the able author of that article is made to say \$4.00, when he had written, \$400.00 per ton.

The Hansell Raspberry.

This new choice variety of raspberry has been introduced by Mr. J. T. Lovett, of Little Silver, N. J., who writes of it in the *American Garden* as follows:

"The history of the Hansell is not without interest. Some eight years ago, it was noticed growing among weeds and grass, by the side of a barn in Burlington county, New Jersey, a spot so unfavorable

nently successful fruit grower. On being transferred to the field, it proved so signally fine and profitable, that Mr. H. set about increasing and planting it, as rapidly as practicable, until at the time of his death (in 1881) he had ten acres of it growing, while his successors continue to plant more. The name, which is synonymous with justice in the region where he formerly lived, is given the seedling, as peculiarly appropriate, to commemorate the name of a good and estimable gentle-



for a raspberry, that only a variety of great inherent vigor could live there. Here it remained for two years, where, in the meantime, it was eaten down by a cow tied near by. By rare good fortune (for it was purely by chance) it escaped being dug up in clearing the ground of elders and other "trash." After a time, a branch attained sufficient age to bear fruit. These first few berries, in their half-buried alive position, were so fine as to attract the attention of the owner of the property—the late J. S. Hansell, a practical and emi-

man well worthy of emulation.

The variety itself, under ordinary culture, may be described as follows: Canes, very hardy, of vigorous growth, and productive. Color of berry, brightest crimson. Texture, very firm. Size, medium to large. Quality, best—unsurpassed. Season, extra early, ripening in advance of all other raspberries, whether black, red, yellow or purple. It will thus be seen, that while it is unsurpassed in other respects, its chief value lies in its extreme earliness."

We give our readers a pretty cut of the comparatively new strawberry called the "Manchester." For this aspirant to public patronage, Mr. Lovett claims that it is "the greatest strawberry on earth," and gives ten plausible reasons for this bold assertion. In support somewhat of those reasons, we find that excellent authority, *Rural New Yorker*, giving its evidence thus :

"Our plants are exceedingly vigorous and productive. We have just examined



them and find that each plant, on an average, bears 16 peduncles or flowering stems, and that each flowering stem bears, on an average, ten berries, giving 160 berries to a plant. We beg to emphasize that we are speaking of *average* plants. On one plant we counted 22 peduncles and 220 berries in the various stages from ripe to just set. This berry is firm, very uniform as to shape, which is roundish conical ; it ripens in every part and averages above medium as long as it remains in fruit. The quality when ripe is good, though like the Wilson, it is sour when it first colors—a characteristic, it seems of all excellent market berries. It ripens with the Sharp-

less and after the Bidwell. * * * It thrives in a light, dry, sandy soil. With us it thrives in a moist soil inclining to clay. Several years ago, from our own tests, we spoke highly of the Sharpless, and soon after its introduction, of the Cumberland Triumph. We have never had occasion to regret this, and we have now little fear that we shall regret commending the Manchester to our readers as the best market berry at present known."

Grape Growers Maxims.

1. Prepare the ground in fall ; plant in spring.
2. Give the vine plenty of manure, old and well decomposed ; for fresh manure excites growth, but does not mature it.
3. Luxuriant growth does not insure fruit.
4. Dig deep, but plant shallow.
5. Young vines produce beautiful fruit, but old vines produce the richest.
6. Prune in autumn to insure growth but in spring to promote fruitfulness.
7. Plant your vines before you put up trellises.
8. Vines, like old soldiers, should have good arms.
9. Prune spurs to one developed bud ; for the nearer the old wood the higher flavored the fruit.
10. Those who prune long must soon climb.
11. Vine leaves love the sun ; the fruit the shade.
12. Every leaf has a bud at the base, and either a bunch of fruit or a tendril opposite it.
13. A tendril is an abortive fruit bunch—a bunch of fruit a productive tendril.
14. A bunch of grapes without a healthy leaf opposite is like a ship at sea without a rudder—it can't come to port.
15. Laterals are like politicians ; if not checked, they are the worst of thieves.—*The Vine Dresser.*

ON THE FARMERS' SIDE.—Speaking of the statement made by Hiram Sibley & Co., the great Rochester and Chicago seedmen, to the Tariff Commission, the *Detroit Free Press* says, editorially: "It was one of those clear, compact, comprehensible utterances which are worth reams of elaborate discussion. When they declared against taxing 7 000,000 seed users for the benefit of 100 seed growers, they turned a perfect flood of electric light upon the iniquity of the tariff."

For the Maryland Farmer.

Russian Mulberry.

As the subject of silk culture is receiving considerable attention in the United States, I thought a few items from this section might prove interesting. I live about twenty miles from a colony of Russian Mennonites—a class of Russian citizens who formerly resided in Germany. Their religious convictions were such however, that they could not serve in the army. About the year 1800, the German Government insisted that they should serve or leave the country. The Czar of Russia then offered them a tract of land in this country, and agreed to exempt them from military duty. They accepted his offer and have continued to reside in Russia from that time until they came here some seven years ago. Many are still in Russia, but several colonies can be found in this State and Kansas, as well as a few in other localities. The Russian Mulberry was introduced into their colonies in Russia by the Russian Government for the purpose of silk culture, and to facilitate rain fall. They were compelled to buy these trees of the government—each land holder must plant a certain number. After cultivating them until they learned their value, they voluntarily propagated them very extensively, and learned that silk culture was not the only consideration in raising them. They found the timber very valuable for fence posts, outlasting any Russian timber. It was also found very valuable for cabinet work, and was considered one of the most desirable trees for fuel. It also bore edible fruit which was marketable in Russia. When the Mennonites came to this country, they brought the seed of this tree with them. They also brought the seed of several other trees, but planted these more extensively than all others combined. We believe that several of these trees will prove very valuable to nurserymen and fruit growers here. The Russian Mulberry is a very rapid grower. Trees, the seed of which was planted by the Mennonites are now twenty feet high, and large enough for fence posts. They grow very large and bear abundant crops of fruit. This fruit resembles blackberries in appearance. A very great per cent. are a jet black, the balance a reddish white. They vary in flavor from sub-acid

to sweet. When mixed with something tart and made into dessert, they are frequently mistaken for raspberries. The habits of growth of this tree is like that of the apple tree; many of the leaves are lobed or cut with from 5 to 12 lobes. The Mennonites also use it as an ornamental hedge plant, and it makes a beautiful hedge and stands shearing as well as any tree. In the estimation of some nurserymen this is the only tree sufficiently hardy to be valuable for silk purposes north of the 40th parallel of north latitude. The Mennonites have interested themselves in the silk business to some extent since they have been in this country, and have some cocoons for sale. If parties wish to know more of this or any tree the Mennonites bought, they can address G. F. Clark, Odell, Gage county, Nebraska.

GROW MORE LEMONS.—It is surprising that more persons do not grow lemons in pots and tubs as room ornaments. A comparatively young plant will grow from twenty-five to fifty lemons a year, and usually they are much better than those we buy. We saw a test recently where one was taken from a tree which yielded double the quantity of juice to a first-class store fruit.—*Gardeners' Monthly*.

[We have always thought that our home-grown lemons were much larger and finer looking than those grown out of doors, but furnished less juice. They are certainly handsome ornaments to a room and are often of great use in a country place, remote from a city, when this fruit is wanted for medicinal purposes.—EDS. MD. FAR,]

S. W. FICKLIN'S STOCK SALE.—It should not be forgotten by breeders of fine stock, that Mr. Ficklin will have a public sale at his Belmont Stock Farm, near Charlottesville, Va., on October 3d, when will be offered short horn cattle, horses of superior breeds, and Berkshire hogs, all of which are of the best and choicest breeds of their respective classes.


DON'T DIE IN THE HOUSE.—Ask druggists for "Rough on Rats." It clears out rats, mice, bed-bugs, roaches, vermin, flies, ants, insects, 15 cents per box.


Journalistic.

THE AGRICULTURAL REVIEW and JOURNAL of the Agricultural Association for August, the third quarterly issue of this year, is on our table, and we find it, as usual, filled with very able articles by distinguished writers upon subjects of national importance germane to agriculture; also interesting articles on New York Agricultural Experiment Station, Burr Oaks 40,000 acre farm, Remington and Fernwood farms, Dairying, etc. This splendid *Review* is published quarterly at \$3 per year, which also includes full membership to the A. A. Association. J. H. Reall, editor and publisher, New York.

THE LONDON GRAPHIC—from the publisher, 190 Strand, London, England. This large sized periodical has much pleasant reading matter and abounds in splendid colored engravings of large size, smaller wood cuts and a beautiful picture accompanies this specimen summer number. Price 1 shilling per copy.

NELSON COUNTY EXAMINER, LOVINGTON, VA., has the following kindly welcome to us:

"The MARYLAND FARMER for Sept., lifted its face above the threshold of our sanctum the other day. Here's our  in welcome."

In return, we extend the right  of fellowship to the *Examiner*, and recognize it as one of our newsiest and most excellent rural exchanges.

THE PRAIRIE FARMER, one of our most valued exchanges, comes to us under the name of the *People's Illustrated Weekly and Prairie Farmer*, and changed in form to 16 pages. The illustrations are elegant, and the reading matter varied, excellent and interesting to all classes of readers. The price remains at \$2 per year, which is low for a weekly that is abreast with other periodicals of higher price. Address *Prairie Farmer Publishing Company, Chicago, Ill.*

ACCORDING to Edwin Alden & Bro.'s American Newspaper Catalogue, just issued, there are 12,158 newspapers published in the United States and the Canadas. Total in the United States, 11,522; Canadas, 636. Published as follows: Dailies, 1,152; Tri-Weeklies, 80; Semi-Weeklies, 150; Weeklies, 9,078; Bi-Weeklies, 23; Semi-Monthlies, 202; Monthlies, 1,290; Bi-Monthlies, 12.

WE RETURN our thanks to that excellent journal, *Greenville Banner*, Augusta county, Va., for the following complimentary notice:

"Saturday's mail brought us the September

number of that sterling husbandman's hand-book, the MARYLAND FARMER, which we find replete with interesting articles for those for whose benefit it is published. Our farmers in want of a good monthly farm journal, should send \$1 to Ezra Whitman, 141 W. Pratt street, Baltimore, Md., for a year's subscription."

Publications Received.

THE PHOTOGRAPHER'S FRIEND—Richard Walz, publisher, Baltimore, Md.—an elegant volume, illustrated and printed in the highest style of art, and filled with good reading highly instructive to all interested in the photographic art. The frontispiece is a correct *life-like* engraved portrait of Mr. W. Mr. Walz is the proprietor of the National Photographic Emporium, 205 W. Baltimore street, Balto., Md., which being the most magnificent emporium of photographic art in this country, is a creditable ornament to the city of monuments. It is at this establishment where every article and appliances needed by artists in photography can be had, and in its princely halls the most artistic pictures are produced, executed in every style, in brief time and at reasonable prices. No visitor to Baltimore should neglect seeing this splendid art emporium.

AMOUNT and composition of the Rain and Drainage Waters, collected at Rothamsted, England, by Sir John Lawes, Dr. Gilbert and R. Warrington, F. C. S. A remarkable book, full of interesting scientific discovery of valuable statistics and valuable information, unknown before, at least to us. Our thanks are due to Sir John for this important addition to our library.

WE ARE much indebted to Mr. H. L. Whitman, of St. Louis, for an exceedingly interesting book, showing the present industry and enterprise of St. Louis, and giving a brief history and account of the several leading commercial and manufacturing establishments of that growing young city, the giant of the great West.

THE BUNKUM RAILROAD—by Fo Ak and Muk Nub. Published by John C. Piet & Co., 174 Baltimore street, Balto., Md. This is the best written production of satire we have read for a long time. It severely ridicules the general management of railroads, and to lovers of fun affords as much merriment as can well be crowded into 100 pages. He who wants a hearty laugh can have it by reading any one or two pages of this little work. It drives the cobwebs from the brain of a hard-worked man on a hot day.

LADIES' DEPARTMENT.

Chats with the Ladies for October.

BY PATUXENT PLANTER.

OCTOBER.

"Oh! suns and skies and clouds of June,
And flowers of June, together,
Ye cannot rival for one hour,
October's bright blue weather;

When loud the bumble-bee makes haste—
Belated, thriftless vagrant—
And golden rod is dying fast,
And lanes with grapes are fragrant;

When gentians roll their fringes tight
To save them from the morning,
And chestnuts fall from satin burrs
Without a sound of warning;

When on the ground red apples lie
In piles like jewels shining,
And redder still on old stone walls
Are leaves of woodbine twining;

When all the lovely wayside things
Their white-winged seeds are sowing,
And in the fields, still green and fair,
Late aftermaths are growing;

When springs run low, and on the brooks
In idle, golden freighting,
Bright leaves sink noiseless in the hush
Of woods, for winter waiting;

When comrades seek sweet country haunts,
By twos and twos together,
And count, like misers, hour by hour
October's bright blue weather;

Oh! suns and skies and flowers of June,
Count all your boasts together!
Love loveth best, of all the year,
October's bright blue weather."

Talk as we will of the pleasures of the mountain homes, sea-side resorts and ocean travels, to while away the heated term of summer, but to my liking, far preferable is a quiet retreat in the country where we are known by all, and can have a fine horse and buggy at command to take us over the hills and dales, at early morn and late evening, to see the flourishing crops, the herds and flocks, and exchanging friendly greetings with long-time friends.

This idea was more forcibly impressed upon my mind, as one beautiful Sabbath evening, lately, I sat upon the wide veranda of a country house, surrounded by old trees of the forest, with rare flowers blooming in beds beyond; squirrels playing as kittens among the branches of those trees; gay plumaged game fowls and the snowy Pekin ducks adorning the green lawn, and saw "the lowing herd wind slowly o'er the lea," and viewed the pretty girls with their cavaliers in full enjoyment of innocent pleasure picking the luscious grapes from the vine clad arbors near by. This last spectacle carried me back to the days of my youth, and as if I was looking through a

telescope into the vista of the long ago past, I recalled a similar scene, when I was a participant in those rural scenes when youth, love and beauty mingled in happy glee upon the shaded turf and passed the roseate hours of youth in the midst of quiet rural scenery. Oh! who can forget his country boy-hood pleasures, or the grand moments when under a glorious sunset he felt and spoke the first emotions of love, to one sweet, refined and gentle divinity that commanded the first pure devotion of his unsoiled heart. Such quietude, such country repose and scenes are worth far more than Mount Washington, Newport, or the orange groves of Florida.

"Give me the joys of a peaceful country home,
From the city's fevered brain afar remote,
Where pure pleasures of a rural life e're flow,
Where summer reddens and beams the rich autumn,
So grandly crowned with sickle and golden sheaf."

Catalogues Received.

From Peter Henderson & Co, 35 and 37 Cortland street, N. Y., their handsome Catalogue of Bulbs, Plants and Seeds for Fall planting and sowing.

From John Saul, Washington City, Dutch and other Bulbous flower roots.

From Thorburn & Titus, 158 Chambers street, N. Y., Bulbs, etc.

Thirty-fourth annual Catalogue of Baltimore Female College.

E. P. Roe's Catalogue of small Fruits and Grape vines for Fall of 1882. Cornwall on the Hudson, N. Y.

In the Oriole trade procession, the Rasin Fertilizer Company made a fine display with its six wagons, and so did the elegant car containing the exquisite silver ware of Charles W. Hamill and Co., which attracted great notice by its brilliant show.

CHAS. H. TORCH & Co., have recently removed from their old quarters on Hanover street, to the large and elegant store on the corner of Charles and Pratt street, where they now offer one of the best selected stocks of goods for the country trade, to be found in this city. Merchants and farmers need look no farther than this house for fair dealings, honesty and reasonable prices.

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PYRETHRUM AND PARIS GREEN.—A correspondent writes the *Country Gentleman* as follows: Some days ago I asked you for information on "pyrethrum" as an agent to destroy potato bugs. At the same time I wrote to a chemist in Baltimore for a parcel of it. On its receipt I applied it and Paris green, with the following results: In one tin box I put eighteen lively potato bugs, and eighteen in another box. On one lot I sprinkled pyrethrum powder. Thirteen minutes after the application I looked to see how they were getting on, and found them all dead. At the same time I put on the other lot Paris green, also in dry powder. In one hour the bugs were stupid, but none dead. In two hours half of them were very dull; the other half had unfortunately escaped. As it was then late in the day, I did not look at them until next morning, when all were dead.

JESSE K. HINES, Insurance Commissioner of the State of Maryland, certifies that the Sun Mutual Aid Society, located in the city of Baltimore, and State of Maryland, is duly organized under the laws of this State, and is authorized to issue policies and transact business as a Co-operative (Mutual Aid) Society.